SONY

4-238-488-**12**(2)

FM Stereo FM-AM Receiver

Operating Instructions

Owner's Record

The model and serial numbers are located on the rear panel. Record the serial number in the space provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No. STR-DE985/DE885 Serial No._____

STR-DE985
STR-DE885

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WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

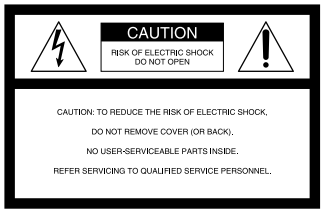
To prevent fire, do not cover the ventilation of the apparatus with newspapers, table-cloths, curtains, etc. And don't place lighted candles on the apparatus.

To prevent fire or shock hazard, do not place objects filled with liquids, such as vases, on the apparatus.

Don't throw away the battery with general house waste, dispose of it correctly as chemical waste.

Do not install the appliance in a confined space, such as a bookcase or built-in cabinet.

For customers in the United States


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

– Reorient or relocate the receiving antenna.
– Increase the separation between the equipment and receiver.
– Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
– Consult the dealer or an experienced radio/TV technician for help.

CAUTION

You are cautioned that any changes or modification not expressly approved in this manual could void your authority to operate this equipment.

Note to CATV system installer:

This reminder is provided to call CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

For customers in Canada

CAUTION

TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED AC PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

For customers in the United States and Canada

ENERGY STAR® is a U.S. registered mark.
As an ENERGY STAR® partner, Sony Corporation has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

This receiver incorporates Dolby* Digital and Pro Logic Surround and the DTS** Digital Surround System.

* Manufactured under license from Dolby Laboratories.
"Dolby", "Pro Logic" and the double-D symbol are trademarks of Dolby Laboratories.

** "DTS", "ES" and "DTS Digital Surround" are registered trademarks of Digital Theater Systems, Inc.

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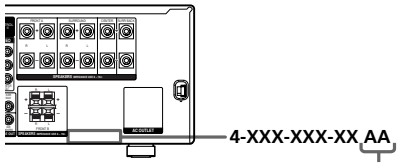
1) STR-DE985 only
2) STR-DE885 only
3) RM-PG411 only

About This Manual

The instructions in this manual are for models STR-DE985 and STR-DE885. Check your model number by looking at the lower right corner of the front panel. In this manual, the STR-DE985 is used for illustration purpose unless stated otherwise. Any difference in operation is clearly indicated in the text, for example, “STR-DE985 only”.

About area codes

The area code of the receiver you purchased is shown on the lower portion of the rear panel (see the illustration below).



Any differences in operation, according to the area code, are clearly indicated in the text, for example, “Models of area code AA only”.

Tip

The instructions in this manual describe the controls on the receiver. You can also use the controls on the supplied remote if they have the same or similar names as those on the receiver. For details on the use of your remote, see

- pages 48–57 for RM-PG411 (STR-DE985 only)
- pages 48–55 for RM-PP411 (STR-DE885 only)

Note for the supplied remote

For RM-PG411 (STR-DE985 only)

The MPX/DUAL and 12 buttons on the remote are not available.

For RM-PP411 (STR-DE885 only)

The AUX, SOURCE, MPX/DUAL, 12 and ON SCREEN buttons on the remote are not available.

How to use this page

Use this page to find the location of buttons that are mentioned in the text.

Illustration number

CUSTOMIZE 13 (42, 44, 65)

Name of button/part — Reference page

Main unit

ALPHABETICAL ORDER

0 – 9

2CH 29 (31, 32)
2ND ROOM (STR-DE985 only) 23 (28)

A – D

A. DEC 31 (29, 31)
AM 35 (40)
CINEMA STUDIO EX A, B, C 14 (30)
CUSTOMIZE 13 (42, 44, 65)
Digital Cinema Studio (indicator) 17 (29)
DIGITAL CONCERT HALL A, B 18 (31)
DIMMER 40 (28)
DISPLAY 4 (28, 60)
Display 15 (28)

E – I

ENTER 32 (42)
EQ 8 (38, 64)
EQUALIZER 27 (38)
FM 36 (40)
FM MODE 37 (40)
FUNCTION 24 (26, 59)
INPUT MODE 26 (26)
IR (receptor) 5 (48, 60)

J – N

Jog dial 34 (20, 35, 37, 38, 42, 44, 63)
LEVEL 10 (25, 37, 63)
MASTER VOLUME 22 (25, 58)
MEMORY 39 (41)
MODE (FUNCTION) 25 (26)
MODE (SOUND FIELD) 30 (30, 31, 59)
MULTI/2CH ANALOG DIRECT 28 (27)
MULTI CHANNEL DECODING (indicator) 11 (27)
MUTING 21 (27, 58)

O – S

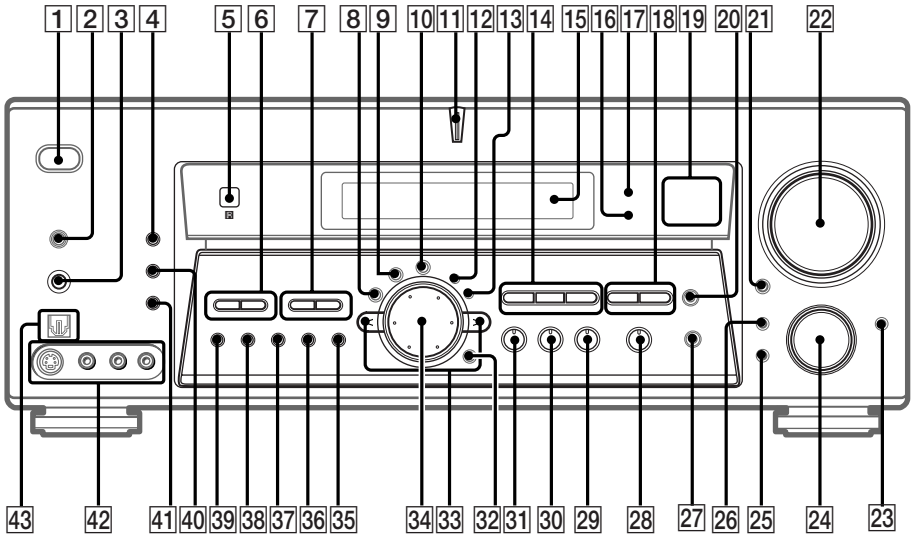
ON SCREEN (STR-DE985 only) 41 (10)
PHONES (jack) 3 (27, 59)
PRESET TUNING +/– 6 (41, 62)
SB DEC (indicator) 16 (33)
SET UP 12 (20, 65)
SHIFT 38 (41)
SPEAKERS A/B 2 (17, 27, 35, 58)
SURR 9 (35, 63)
SURR BACK DECODING 20 (33)

T – Z

TUNING +/– 7 (40)
VIDEO 3 DIGITAL INPUT (jack) 43 (11)
VIDEO 3 INPUT (jacks) 42 (10)
VIDEO SELECT INDICATOR 19 (26)

BUTTON DESCRIPTIONS

I/⏻ (power) 1 (19, 25, 39, 62)
</> 33 (20, 35, 37, 38, 42, 44, 63)

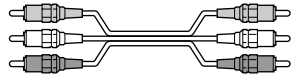


Required cords

The following cords **A** – **H** are required when you hook up the components (pages 8–15).

A Audio cord (not supplied)

B Audio/video cord (not supplied)



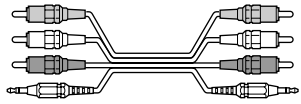
C Video cord (not supplied)

D Optical digital cord (not supplied)

E Coaxial digital cord (not supplied)

F Monaural audio cord (not supplied)

G Audio/video/control S cord (1 for models of area code U, CA) (STR-DE985 only)

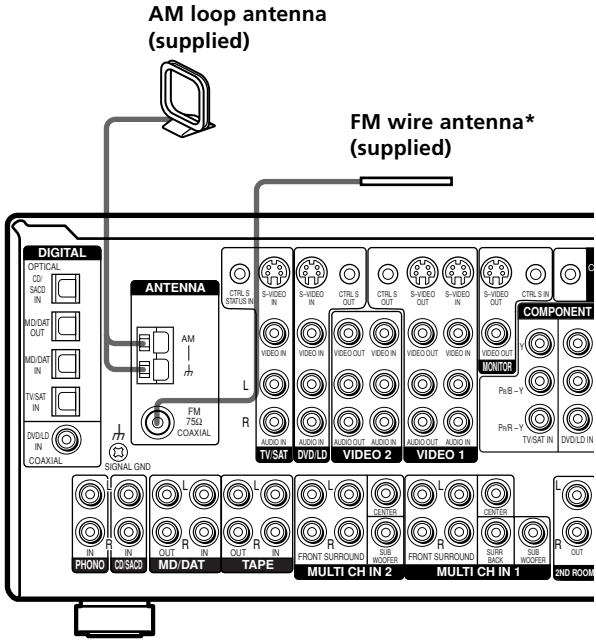


H Monaural mini-plug cord (1 for models of area code U, CA) (STR-DE985 only)

Before you get started

- Turn off the power to all components before making any connections.
- Do not connect the AC power cord until all of the connections are completed.
- Be sure to make connections firmly to avoid hum and noise.
- When connecting an audio/video cord, be sure to match the color-coded pins to the appropriate jacks on the components: yellow (video) to yellow; white (left, audio) to white; and red (right, audio) to red.
- When you connect optical digital cords, insert the cord plugs straight in until they click into place.
- Do not bend or tie the optical digital cord.

Antenna hookups



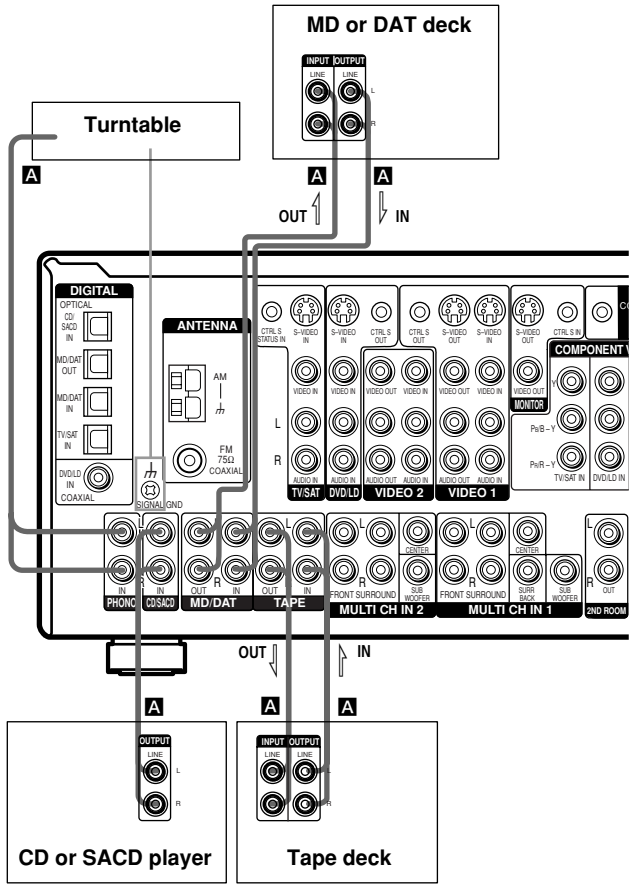
* The shape of the connector varies depending on the area code.

Notes on antenna hookups

- To prevent noise pickup, keep the AM loop antenna away from the receiver and other components.
- Be sure to fully extend the FM wire antenna.
- After connecting the FM wire antenna, keep it as horizontal as possible.
- Do not use the ⏚ SIGNAL GND terminal for grounding the receiver.

Audio component hookups

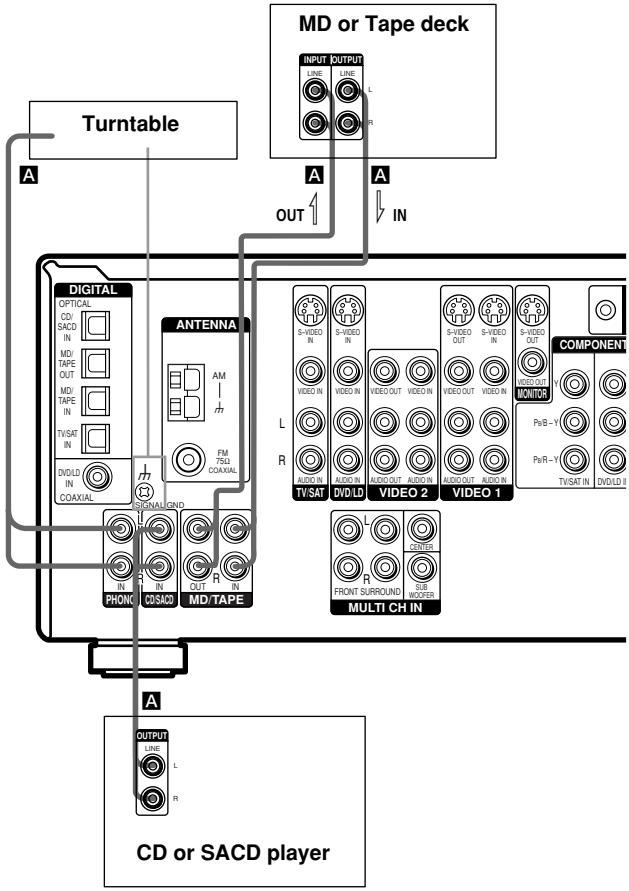
STR-DE985 only



Note on audio component hookups

If your turntable has a ground wire, connect it to the ⏚ SIGNAL GND terminal.

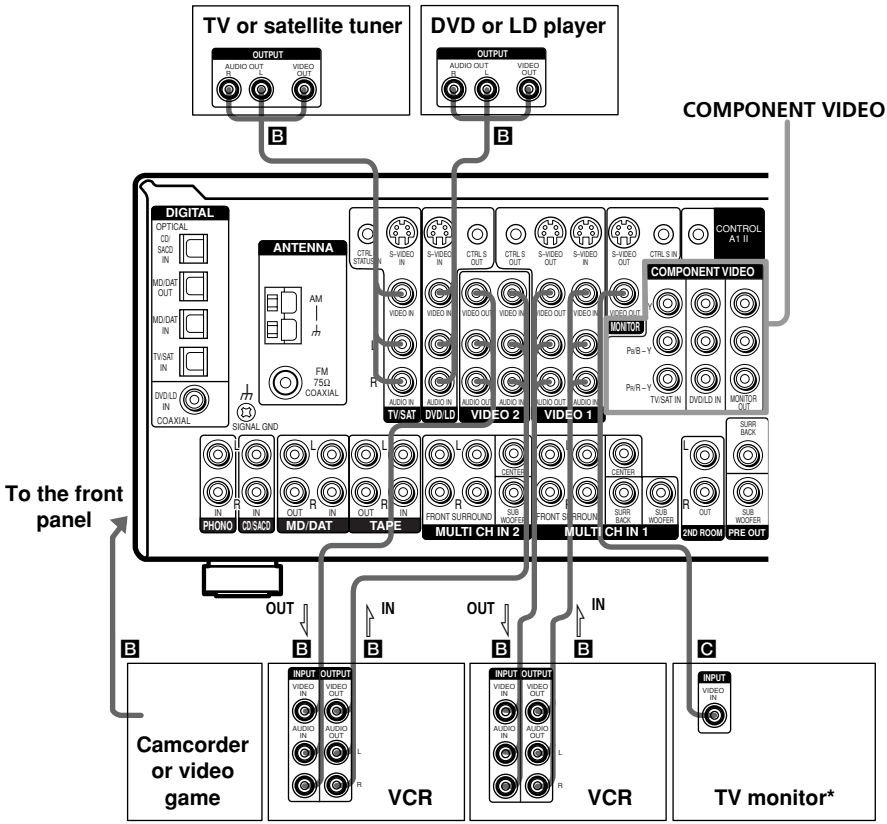
STR-DE885 only



Note on audio component hookups

If your turntable has a ground wire, connect it to the ⏚ SIGNAL GND terminal.

Video component hookups



* For STR-DE985, you can display the SURR, LEVEL, EQ, SET UP and CUSTOMIZE parameters and selected sound field by pressing ON SCREEN.

Note on video component hookups

You can connect your TV's audio output jacks to the TV/SAT AUDIO IN jacks on the receiver and apply sound effects to the audio from the TV. In this case, do not connect the TV's video output jack to the TV/SAT VIDEO IN jack on the receiver. If you are connecting a separate TV tuner (or satellite tuner), connect both the audio and video output jacks to the receiver as shown above.

If you have a TV, satellite tuner, DVD player, or LD player with COMPONENT VIDEO (Y, B-Y, R-Y) output jacks and a monitor with COMPONENT VIDEO input jacks, use a video cord (not supplied) to connect to the receiver.

Tip

When using the S-video jacks instead of the video jacks, your monitor must also be connected via an S-video jack. S-video signals are on a separate bus from the video signals and will not be output through the video jacks.

Notes

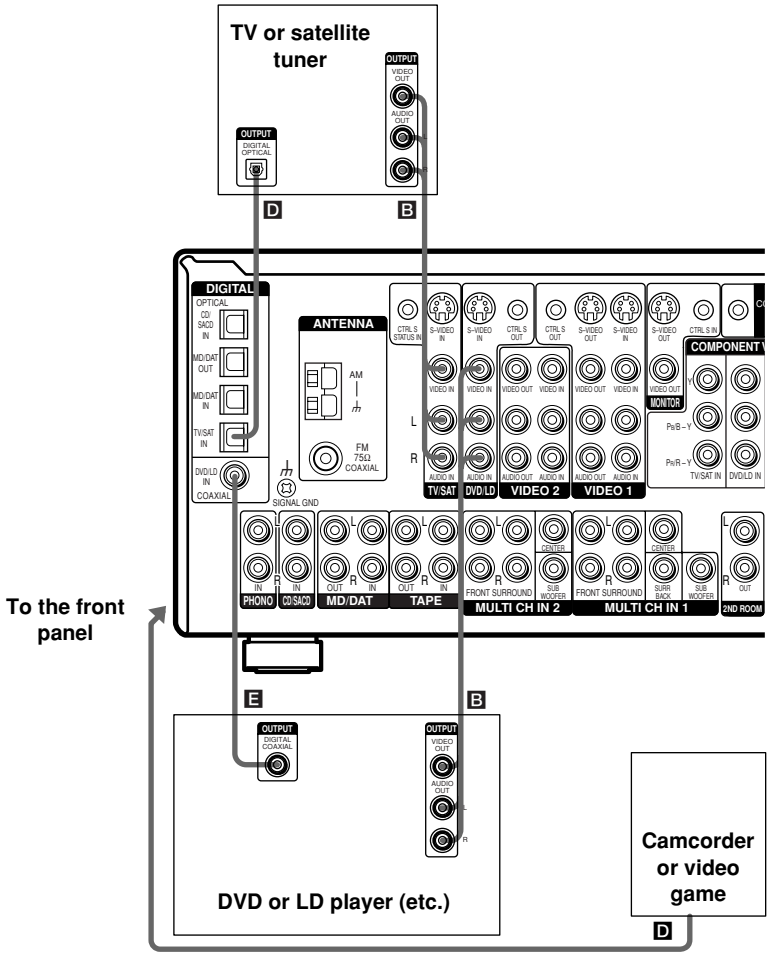
- If you make COMPONENT VIDEO connections, nothing is displayed on the on-screen display (STR-DE985 only).
- On this receiver, the component video signals are not compatible with S-video signals or video signals.

Digital component hookups

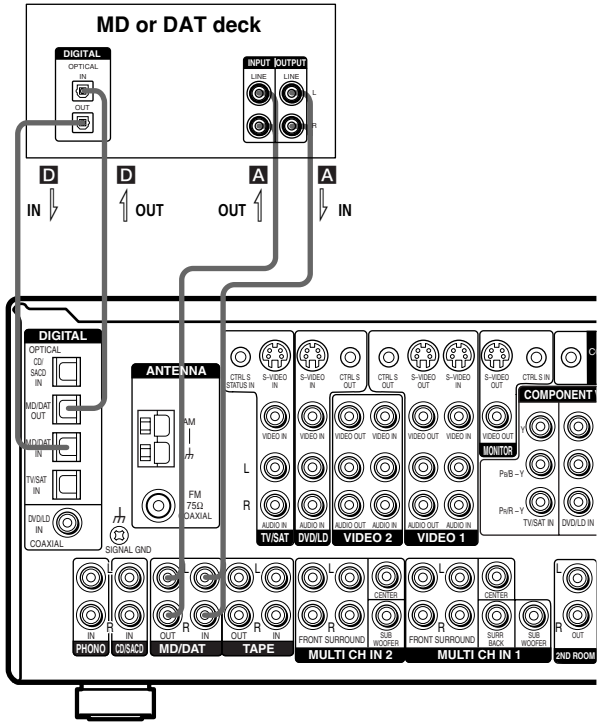
Connect the digital output jacks of your DVD player and satellite tuner (etc.) to the receiver's digital input jacks to bring the multi channel surround sound of a movie theater into your home. To fully enjoy multi channel surround sound, five speakers (two front speakers, two surround speakers, and a center speaker) and a sub woofer are required. For 6.1 channel surround sound, you will also need a surround back speaker (STR-DE985) or refer page 18 (STR-DE885). You can also connect an LD player with an RF OUT jack via an RF demodulator, like the Sony MOD-RF1 (not supplied).

Note

You cannot connect an LD player's DOLBY DIGITAL RF OUT jack directly to this unit's digital input jacks. You must first convert the RF signal to either an optical or coaxial digital signal. For details, see "Troubleshooting" on page 58.



Connect the digital output jacks of your MD or DAT deck to the receiver's digital input jack and connect the digital input jacks of your MD or DAT deck to the receiver's digital output jack. These connections allow you to make digital recordings of TV broadcasts, etc.



Notes

- You cannot make digital recordings when the source is a multi channel digital source.
- All the OPTICAL and COAXIAL jacks are compatible with 96 kHz, 48 kHz, 44.1 kHz and 32 kHz sampling frequencies.
- It is not possible to record analog signals to the components connected to MD/DAT (STR-DE985) or MD/TAPE (STR-DE885) and VIDEO jacks with only digital connections. To record analog signals, make analog connections. To record digital signals, make digital connections.
- The sound is not output when you play a SACD disc on the SACD player connected to the CD/SACD OPTICAL IN jack on this unit. Connect to the analog input jacks (CD/SACD IN jacks). Refer to the operating instructions supplied with the SACD player.

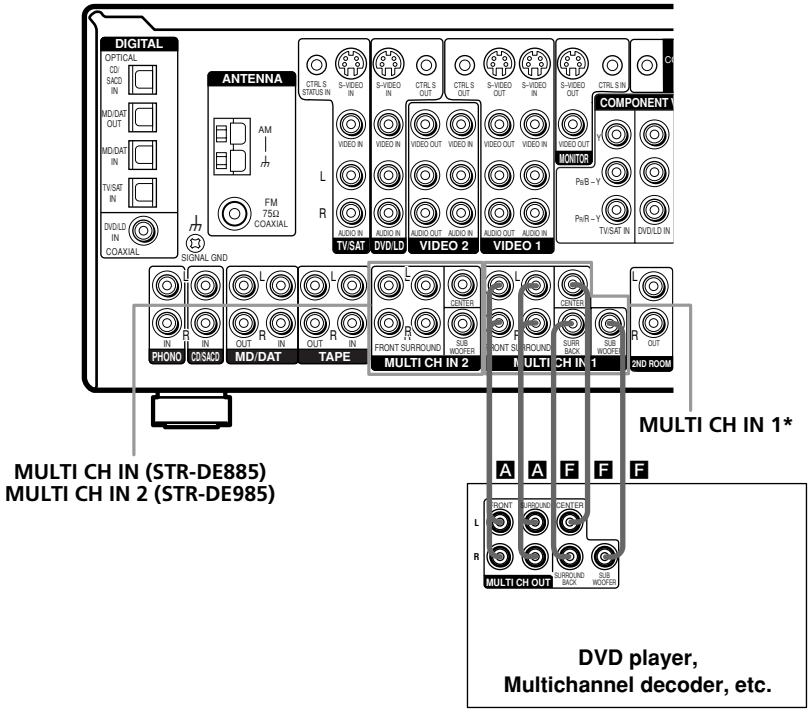
Multi channel input hookups

Although this receiver incorporates a multi channel decoder, it is also equipped with multi channel input jacks. These connections allow you to enjoy multi channel software encoded in formats other than Dolby Digital and DTS. If your DVD player is equipped with multi channel output jacks, you can connect them directly to the receiver to enjoy the sound of the DVD player's multi channel decoder. Alternatively, the multi channel input jacks can be used to connect an external multi channel decoder.

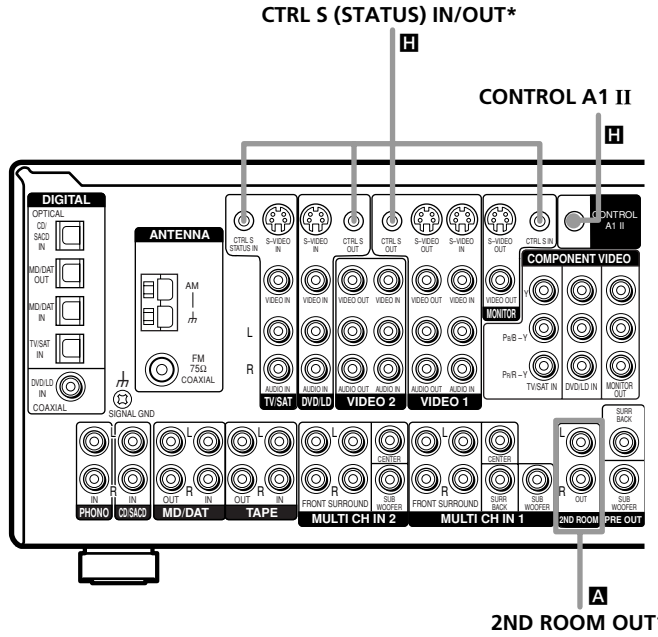
To fully enjoy multi channel surround sound, five speakers (two front speakers, two surround speakers, and a center speaker) and a sub woofer are required. For 6.1 channel surround sound, you will also need a surround back speaker (STR-DE985) or refer page 18 (STR-DE885). Refer to the operating instructions supplied with your DVD player, multi channel decoder, etc., for details on the multi channel hookups.

Notes

- When using the connections described below, adjust the level of the surround speakers and sub woofer from the DVD player or multi channel decoder.
- See page 17 for details on speaker system hookup.



* STR-DE985 only



* STR-DE985 only

CONTROL A1 II hookup

- **If you have a CONTROL A1 II compatible Sony CD player, SACD player, tape deck, or MD deck**

  Use a monaural mini-plug cord (not supplied) to connect the CONTROL A1 II jack on the CD player, SACD player, tape deck, or MD deck to the CONTROL A1 II jack on the receiver. Refer to "CONTROL A1 II control system" on page 46 and the operating instructions supplied with your CD player, SACD player, tape deck, or MD deck for details.

  Note

  If you make CONTROL A1 II connections from the receiver to an MD deck that is also connected to a computer, do not operate the receiver while using the "Sony MD Editor" software. This may cause a malfunction.

- **If you have a Sony CD changer with a COMMAND MODE selector**

  If your CD changer's COMMAND MODE selector can be set to CD 1, CD 2, or CD 3, be sure to set the command mode to "CD 1" and connect the changer to the CD jacks on the receiver.

  However, if you have a Sony CD changer with VIDEO OUT jacks, set the command mode to "CD 2" and connect the changer to the VIDEO 2 jacks on the receiver.

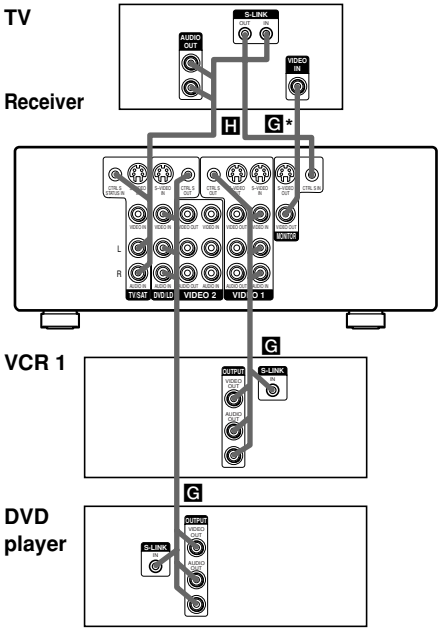
S-LINK CONTROL S hookup

(STR-DE985 only)

If you have a S-LINK CONTROL S-compatible Sony TV, satellite tuner, monitor, DVD player or VCR, use an audio/video/control S connecting cord (supplied) or a monaural mini-plug cord (supplied) to connect the CTRL S (STATUS) IN (for TV, satellite tuner, or monitor) or OUT (for VCR, etc.) jack on the receiver to the appropriate S-LINK jack on the respective component. Refer to the operating instructions supplied with your TV, satellite tuner, monitor, VCR, etc., for details.

The following illustration is an example of S-LINK CONTROL S hookups between the receiver, a TV, a VCR, and a DVD player. When your TV is connected to the receiver as shown below, the TV input mode will change to video input whenever you turn on the receiver. When you connect the receiver as shown below, input mode of the receiver changes to VIDEO 1 or DVD/LD whenever you play your VCR or DVD.

The following connections will also change the input mode of the receiver to TV whenever you operate your TV.



* Pull the video cord away from the supplied audio/video/control S cable.

Note

Refer to the operating instructions supplied with your TV for details regarding the operations you can control from your TV.

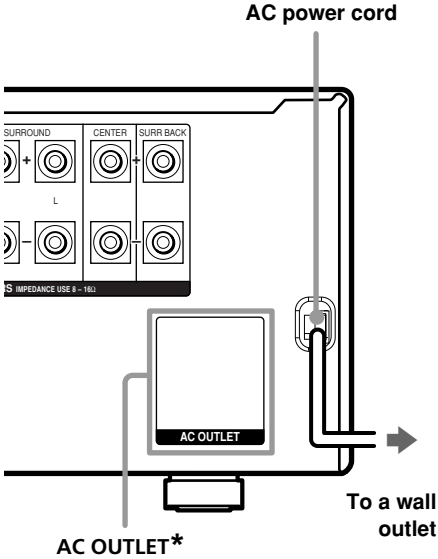
2ND ROOM hookup

(STR-DE985 only)

You can use the 2ND ROOM OUT jacks to output the audio signals of the selected component to a stereo amplifier located in another room (page 28).

continued

Connecting the AC power cord



* The configuration, shape, and number of AC outlets vary according to the model and country to which the receiver is shipped.

Before connecting the AC power cord of this receiver to a wall outlet, connect the speaker system to the receiver (page 17).

Connect the AC power cord(s) of your audio/video components to a wall outlet.

If you connect other audio/video components to the AC OUTLET(s) on the receiver, the receiver will supply power to the connected component(s), allowing you to turn the whole system on or off when you turn the receiver on or off.

Caution

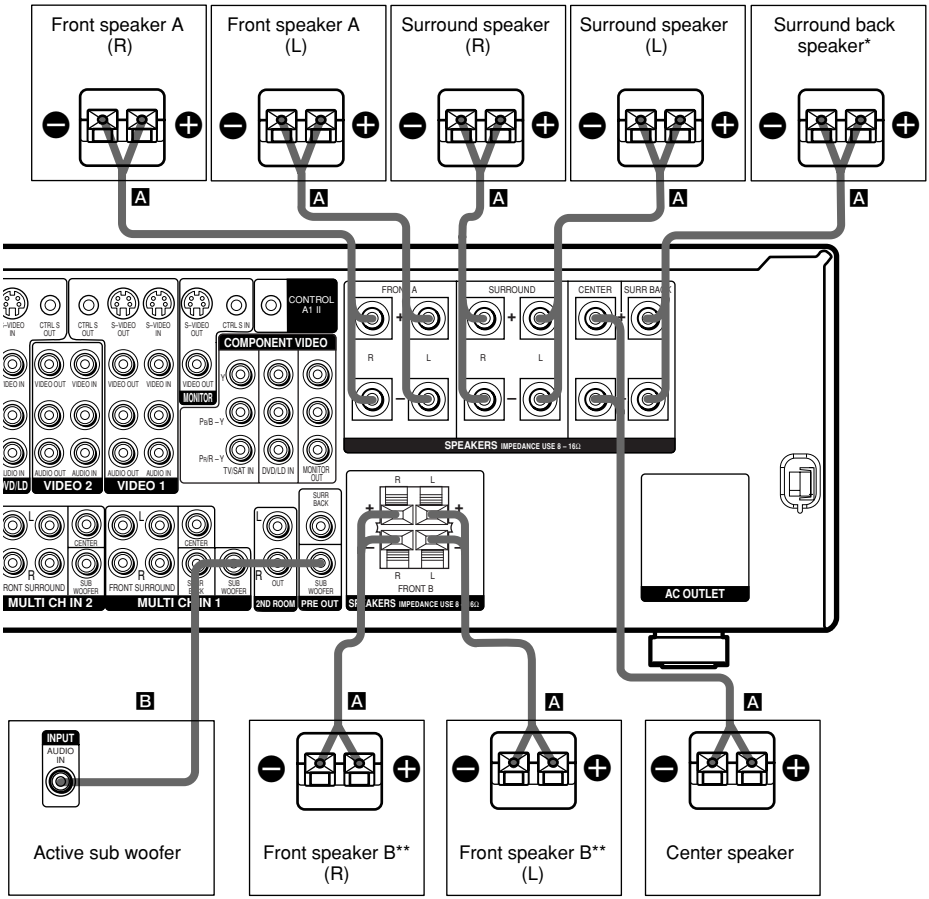
Make sure that the total power consumption of the component(s) connected to the receiver's AC OUTLET(s) does not exceed the wattage stated on the rear panel. Do not connect high-wattage electrical home appliances such as electric irons, fans, or TVs to this outlet.

Speaker system hookups

Required cords

A Speaker cords (not supplied)

B Monaural audio cord (not supplied)



* STR-DE985 only.

** If you have an additional front speaker system, connect them to the SPEAKERS FRONT B terminals. You can select the front A or B speakers using the SPEAKERS A/B button (page 27).

continued

Notes

- Twist the stripped ends of the speaker cords about 10 mm (2/3 inch). Be sure to match the speaker cord to the appropriate terminal on the components: + to + and – to –. If the cords are reversed, the sound will be distorted and will lack bass.
- If you use speakers with low maximum input rating, adjust the volume carefully to avoid excessive output on the speakers.

SURR BACK hookup

(STR-DE885 only)

The receiver lets you enjoy 6.1 channel surround sound when you connect the receiver's SURR BACK jack to the INPUT jack on another power amplifier with a monaural audio cord. For details on the use of sound field, see page 33.

Tip

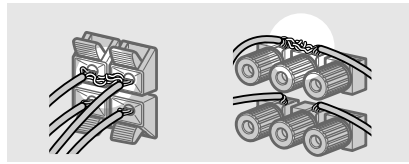
To enjoy the 6.1 channel surround sound, set the SURR BACK parameter to "LARGE" or "SMALL" (page 21).

To avoid short-circuiting the speakers

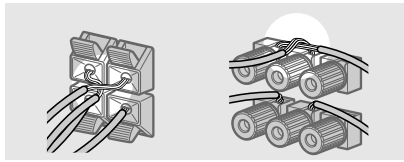
Short-circuiting of the speakers may damage the receiver. To prevent this, make sure to take the following precautions when connecting the speakers.

Make sure the stripped ends of each speaker cord does not touch another speaker terminal, the stripped end of another speaker cord, or the metal parts of the receiver.

Examples of poor conditions of the speaker cord



Stripped speaker cord is touching another speaker terminal.



Stripped cords are touching each other due to excessive removal of insulation.

After connecting all the components, speakers, and AC power cord, output a test tone to check that all the speakers are connected correctly. For details on outputting a test tone, see page 25.

If no sound is heard from a speaker while outputting a test tone or a test tone is output from a speaker other than the one whose name is currently displayed on the receiver, the speaker may be short-circuited. If this happens, check the speaker connection again.

To avoid damaging your speakers

Make sure that you turn down the volume before you turn off the receiver. When you turn on the receiver, the volume remains at the level you turn off the receiver.

Performing initial setup operations

Once you have hooked up the speakers and turned on the power, clear the receiver's memory. Then specify the speaker parameters (size, position, etc.) and perform any other initial setup operations necessary for your system.

Tip

To check the audio output during settings (to set up while outputting the sound), check the connection (page 25).

Clearing the receiver's memory

Before using your receiver for the first time, or when you want to clear the receiver's memory, do the following.

1 Turn off the receiver.

2 Hold down I/⏻ for 5 seconds.

"MEMORY CLEARING", then "MEMORY CLEARED" appears in the display and all of the following items are reset or cleared:

- All preset stations are reset or cleared.
- All sound field parameters are reset to their factory settings.
- All index names (of preset stations and program sources) are cleared.
- All SET UP and CUSTOMIZE parameters are reset to their factory settings.
- The sound field memorized for each program source and preset stations are cleared.
- The master volume is set to VOLUME MIN.

Performing initial setup operations

Before using your receiver for the first time, adjust SET UP parameters so that the receiver correspond to your system. For the adjustable parameters, see the table on page 66. See pages 20–25 for speaker settings.

Multi channel surround setup

For the best possible surround sound, all speakers should be the same distance from the listening position (Ⓐ).

However, the receiver lets you to place the center speaker up to 1.5 meters (5 feet) closer (Ⓑ), the surround speakers up to 4.5 meters (15 feet) closer (Ⓒ) and the surround back speakers up to 4.5 meters (15 feet) closer (Ⓓ) to the listening position.

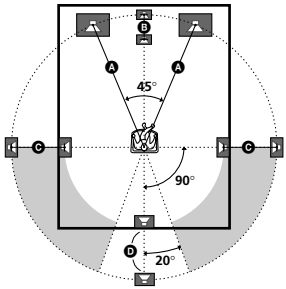
The front speakers can be placed from 1.0 to 12.0 meters (3 to 40 feet) from the listening position (Ⓐ).

You can place the surround speakers either behind you or to the side, depending on the shape of your room (etc.).

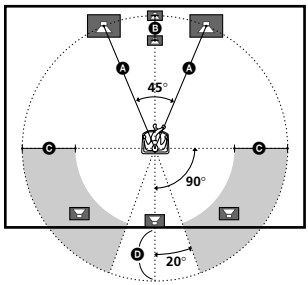
continued

Multi channel surround setup (continued)

When placing surround speakers to your side



When placing surround speakers behind you



Tip

When you set up the surround back speaker, set the speaker at least 1 meter behind the listening position. It is recommended to place the speaker at an equal distance from the surround left and right speakers. If there is no space behind the listening position, set the speaker above the listening position by placing it on a stand or hanging it from the ceiling. To prevent speaker damage or injury in case the speaker falls, make sure that it is properly fixed in place.

Note

Do not place the center speaker farther away from the listening position than the front speakers.

Specifying the speaker parameters

1 Press SET UP.

2 Press < or > to select the parameter you want to adjust.

3 Turn the jog dial to select the setting you want.

The setting is entered automatically.

4 Repeat steps 2 and 3 until you have set all of the parameters that follow.

Initial settings

Parameter	Initial setting
FRONT	LARGE
CENTER	LARGE
SURROUND	LARGE
SURR BACK	LARGE[1)]/NO[2)]
SUB WOOFER	YES
SURR POSI.[3)]	SIDE
SURR HEIGHT[3)]	LOW
SURR BACK HGT.[3)]	LOW
FRONT XX.X feet[3)]	16 feet
CENTER XX.X feet[3)]	16 feet
SURROUND XX.X feet[3)]	16 feet
SURR BACK XX.X feet[3)]	16 feet
SUB WOOFER XX.X feet[3)]	16 feet
DISTANCE UNIT[3)]	feet
FRONT SP > XXX Hz[3)]	STD (120 Hz)
CENTER SP > XXX Hz[3)]	STD (120 Hz)
SURROUND SP > XXX Hz[3)]	STD (120 Hz)
SURR BACK SP > XXX Hz[3)]	STD (120 Hz)
LFE HIGH CUT > XXX Hz[3)]	STD (120 Hz)
S.W PHASE[3)]	NORMAL

1) STR-DE985 only
2) STR-DE885 only
3) You can set this parameter only when you set "MENU EXPAND" to "ON" in the CUSTOMIZE menu (page 44).

■ Front speaker size (FRONT)

- If you connect large speakers that will effectively reproduce bass frequencies, select “LARGE”. Normally, select “LARGE”.
- If the sound is distorted, or you feel a lack of surround effects when using multi channel surround sound, select “SMALL” to activate the bass redirection circuitry and output the front channel bass frequencies from the sub woofer.
- When the front speakers are set to “SMALL”, the center, surround, and surround back speakers are also automatically set to “SMALL” (unless previously set to “NO”).

■ Center speaker size (CENTER)

- If you connect a large speaker that will effectively reproduce bass frequencies, select “LARGE”. Normally, select “LARGE”. However, if the front speakers are set to “SMALL”, you cannot set the center speaker to “LARGE”.
- If the sound is distorted, or you feel a lack of surround effects when using multi channel surround sound, select “SMALL” to activate the bass redirection circuitry and output the center channel bass frequencies from the front speakers (if set to “LARGE”) or sub woofer.*1
- If you do not connect a center speaker, select “NO”. The sound of the center channel will be output from the front speakers.*2

■ Surround speaker size (SURROUND)

- If you connect large speakers that will effectively reproduce bass frequencies, select “LARGE”. Normally, select “LARGE”. However, if the front speakers are set to “SMALL”, you cannot set the surround speakers to “LARGE”.
- If the sound is distorted, or you feel a lack of surround effects when using multi channel surround sound, select “SMALL” to activate the bass redirection circuitry and output the surround channel bass frequencies from the sub woofer or other “LARGE” speakers.
- If you do not connect surround speakers, select “NO”.*3

Tip

*1–*3 correspond to the following Dolby Pro Logic modes

*1 NORMAL

*2 PHANTOM

*3 3 STEREO

■ Surround back speaker size (SURR BACK)

You can set this parameter only when you make SURR BACK hookup (STR-DE885) (page 18) or connect a surround back speaker (STR-DE985) (page 17).

- If you connect a large speaker that will effectively reproduce bass frequencies, select “LARGE”. Normally, select “LARGE”. However, if the front speakers are set to “SMALL”, you cannot set the surround back speaker to “LARGE”.
- If the sound is distorted, or you feel a lack of surround effects when using multi channel surround sound, select “SMALL” to activate the bass redirection circuitry and output the center channel bass frequencies from the front speakers (if set to “LARGE”) or sub woofer.
- If you do not make SURR BACK hookup (STR-DE885) or connect a surround back speaker (STR-DE985), select “NO”.

Tip

Internally, the LARGE and SMALL settings for each speaker determine whether or not the internal sound processor will cut the bass signal from that channel. When the bass is cut from a channel, the bass redirection circuitry sends the corresponding bass frequencies to the sub woofer or other “LARGE” speakers.

However, since bass sounds have a certain amount of directionality, it is best not to cut them, if possible. Therefore, even when using small speakers, you can set them to “LARGE” if you want to output the bass frequencies from that speaker. On the other hand, if you are using a large speaker, but prefer not to have bass frequencies output from that speaker, set it to “SMALL”.

If the overall sound level is lower than you prefer, set all speakers to “LARGE”. If there is not enough bass, you can use the equalizer to boost the bass levels. To adjust the equalizer, see page 38.

continued

Multi channel surround setup (continued)

■ Sub woofer selection (SUB WOOFER)

- If you connect a sub woofer, select “YES”.
- If you do not connect a sub woofer, select “NO”. This activates the bass redirection circuitry and outputs the LFE signals from other speakers.
- In order to take full advantage of the Dolby Digital bass redirection circuitry, we recommend setting the sub woofer’s cut off frequency as high as possible.

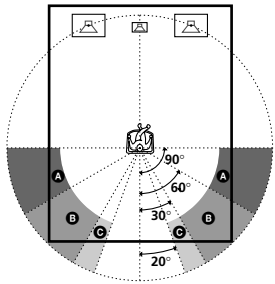
Advance Settings

The parameters below are for the advanced speaker settings. They appear in the display window only when you set “MENU EXPAND” to “ON” in the CUSTOMIZE menu (page 44).

■ Surround speaker position (SURR POSI.)*

This parameter lets you specify the location of your surround speakers for proper implementation of the Digital Cinema Sound surround modes. Refer to the illustration below.

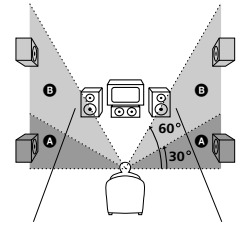
- Select “SIDE” if the location of your surround speakers corresponds to section Ⓐ.
- Select “MIDDLE” if the location of your surround speakers corresponds to section Ⓑ.
- Select “BEHIND” if the location of your surround speakers corresponds to section Ⓒ. This parameter is available only when the surround back speaker size is set to “NO”.



■ Surround speaker height (SURR HEIGHT)*/Surround back speaker height (SURR BACK HGT.)**

This parameter lets you specify the height of your surround and surround back speaker(s) for proper implementation of the Digital Cinema Sound surround modes. Refer to the illustration below.

- Select “LOW” if the location of your surround speakers corresponds to section Ⓐ.
- Select “HIGH” if the location of your surround speakers corresponds to section Ⓑ.



* These parameters are not available when “Surround speaker size (SURROUND)” is set to “NO”.

** This parameter is not available when “Surround back speaker size (SURR BACK)” is set to “NO”.

Tip

The surround/surround back speaker position parameter is designed specifically for implementation of the Digital Cinema Sound modes with virtual elements.

With the Digital Cinema Sound modes, speaker position is not as critical as other modes. All modes with virtual elements were designed under the premise that the surround speaker would be located behind the listening position, but presentation remains fairly consistent even with the surround speakers positioned at a rather wide angle. However, if the speakers are pointing towards the listener from the immediate left and right of the listening position, the sound fields with virtual elements will not be effective unless the surround speaker position parameter is set to "SIDE".

Nevertheless, each listening environment has many variables, like wall reflections, and you may obtain better results using "BEHIND" or "MIDDLE" if your speakers are located high above the listening position, even if they are to the immediate left and right.

Therefore, although it may result in a setting contrary to the "Surround speaker position" explanation, we recommend that you playback multi channel surround encoded software and listen to the effect each setting has on your listening environment. Choose the setting that provides a good sense of spaciousness and that best succeeds in forming a cohesive space between the surround sound from the surround speakers and the sound of the front speakers. If you are not sure which sounds best, select "BEHIND" and then use the speaker distance parameter and speaker level adjustments to obtain proper balance.

■ Front speaker distance (FRONT XX.X feet)

Set the distance from your listening position to the front speakers (Ⓐ on page 20).

■ Center speaker distance (CENTER XX.X feet)

Set the distance from your listening position to the center speaker. Center speaker distance should be set from a distance equal to the front speaker distance (Ⓐ on page 20) to a distance 1.5 meters (5 feet) closer to your listening position (Ⓑ on page 20). When this range is exceeded, the display flashes. If you make the setting while the display flashes, you cannot fully enjoy the surround effect.

■ Surround speaker distance (SURROUND XX.X feet)

Set the distance from your listening position to the surround speakers. Surround speaker distance should be set from a distance equal to the front speaker distance (Ⓐ on page 20) to a distance 4.5 meters (15 feet) closer to your listening position (Ⓒ on page 20). When this range is exceeded, the display flashes. If you make the setting while the display flashes, you cannot fully enjoy the surround effect.

■ Surround back speaker distance (SURR BACK XX.X feet)

Set the distance from your listening position to the surround back speaker. Surround back speaker distance should be set from a distance equal to the front speaker distance (Ⓐ on page 20) to a distance 4.5 meters (15 feet) closer to your listening position (Ⓓ on page 20). When this range is exceeded, the display flashes. If you make the setting while the display flashes, you cannot fully enjoy the surround effect.

■ Sub woofer distance (SUB WOOFER XX.X feet)

Set the distance from your listening position to the sub woofer.

continued

Multi channel surround setup (continued)

Tip

The receiver allows you to input the speaker position in terms of distance. However, it is not possible to set the center speaker further than the front speakers. Also, the center speaker cannot be set more than 1.5 meters (5 feet) closer than the front speakers.

Likewise, the surround and surround back speakers can not be set farther away from the listening position than the front speakers. And they can be no more than 4.5 meters (15 feet) closer.

This is because incorrect speaker placement is not conducive to enjoy surround sound.

Please note that, setting the speaker distance closer than the actual location of the speakers will cause a delay in the output of the sound from that speaker. In other words, the speaker will sound like it is farther away.

For example, setting the center speaker distance 1~2 m (3~6 feet) closer than the actual speaker position will create a fairly realistic sensation of being "inside" the screen. If you cannot obtain a satisfactory surround effect because the surround speakers are too close, setting the surround speaker distance closer (shorter) than the actual distance will create a larger sound stage.

Adjusting these parameter while listening to the sound often results in much better surround sound. Give it a try!

■ Distance unit (DISTANCE UNIT)

Lets you select either feet or meters as the unit of measure for setting distances.

■ Front speaker crossover frequency (FRONT SP > XXX Hz)

Lets you adjust the front speaker bass crossover frequency when the front speakers are set to "SMALL".

■ Center speaker crossover frequency (CENTER SP > XXX Hz)

Lets you adjust the center speaker bass crossover frequency when the center speaker is set to "SMALL".

■ Surround speaker crossover frequency (SURROUND SP > XXX Hz)

Lets you adjust the surround speaker bass crossover frequency when the surround speakers are set to "SMALL".

■ Surround back speaker crossover frequency (SURR BACK SP > XXX Hz)

Lets you adjust the surround back speaker bass crossover frequency when the surround back speaker is set to "SMALL".

Note

You can set the FRONT, CENTER, SURROUND and SURR BACK parameters when the speaker size is set to "SMALL".

■ LFE high cut filter (LFE HIGH CUT > XXX Hz)

Lets you select the cut off frequency of the LFE channel high cut filter. Normally, select "STD". When using a passive sub woofer powered by a separate power amplifier, it may be better to change the cut off frequency.

■ Sub woofer phase polarity (S.W PHASE)

Set the sub woofer phase polarity. There is usually no problem when the sub woofer phase polarity is set to "NORMAL". However, depending on the type of front speakers, the position of the sub woofer, and the cut-off frequency of the sub woofer, setting the phase polarity to "REVERSE" may produce better bass. Besides bass reproduction, the richness and tightness of the overall sound may also be affected. While listening from the main listening position, select the setting that best suits your environment.

Adjusting the speaker level

Use the remote while seated in your listening position to adjust the level of each speaker.

Note

The receiver incorporates a new test tone with a frequency centered at 800 Hz for easier speaker level adjustment.

1 Press I/⏻ to turn on the receiver.

2 Press TEST TONE on the remote.

"TEST TONE" appears in the display and you will hear the test tone from each speaker in sequence.

3 To change the test tone mode, press ←/→ to select the mode you want.

Mode	The test tone output
NORMAL	The test tone is output from each speaker in sequence.
PHASE	The test tone is output from two speakers at a time in sequence. (There is no sound output from the sub woofer.) You can also adjust the balance between speakers.
2CH SWAP*	You can adjust the speaker levels while listening to the source (not the test tone). Turn on the connected component, start playback, then turn FUNCTION to select the component (except when connected to the MULTI CH IN** jacks). The sound for the front L/R speakers is output from the surround R/L speakers. You can adjust the level of surround speakers from the listening position.

* You cannot select "2CH SWAP" when "2CH ANALOG DIRECT" is selected (page 27).

** For STR-DE985, MULTI CH IN 1 or 2.

4 Adjust the LEVEL parameters so that the level of the test tone from each speaker sounds the same when you are in your main listening position.

Press LEVEL to adjust the balance and level of speakers. For details on the LEVEL menu, see page 37.

While adjusting, the test tone is output from the speaker whose adjustment is performed.

5 Press TEST TONE again to turn off the test tone.

Tips

- You can adjust the level of all speakers at the same time. Turn MASTER VOLUME on the main unit or press MASTER VOL +/– on the remote.
- In step 3, you can select the mode using the jog dial on the receiver.

Notes

- The adjusted value are shown in the display during adjustment.
- Although these adjustments can also be made via the front panel using the LEVEL menu (when the test tone is output, the receiver switches to the LEVEL menu automatically), we recommend you follow the procedure described above and adjust the speaker levels from your listening position using the remote.

Checking the connections

After connecting all of your components to the receiver, do the following to verify that the connections were made correctly.

1 Press I/⏻ to turn on the receiver.

2 Turn on the component that you connected (e.g., CD player or tape deck).

3 Rotate FUNCTION to select the component (program source).

4 Start playing.

If you do not obtain normal sound output after performing this procedure, see "Troubleshooting" on page 58 and take the appropriate measures to correct the problem.

Selecting the component

FUNCTION control

Turn FUNCTION control to select the component you want to use.

To select	Rotate to light
VCR	VIDEO 1* or VIDEO 2*
Camcorder or video game	VIDEO 3*
DVD or LD player	DVD/LD*
TV or satellite tuner	TV/SAT*
Tape deck MD or Tape deck	TAPE (STR-DE985) MD/TAPE (STR-DE885)
MD or DAT deck	MD/DAT (STR-DE985)
CD or SACD player	CD/SACD
Built in tuner	TUNER
Turntable	PHONO

* VIDEO SELECT INDICATOR lights up when selected.

After turning on the component you selected, select the component and play the program source.

- After selecting VCR, camcorder, video game, DVD player, or LD player, turn on the TV and set the TV's video input to match the component you selected.

MODE (FUNCTION)

Press to select and play another video/audio source in combination with the selected component.
Each time you press the button, the display changes cyclically as follows:

VISUAL: XXXXXX → AUDIO: XXXXXX → Selected component

Press MODE (FUNCTION) to display	And rotate FUNCTION to select
VISUAL: XXXXXX	Any video source to enjoy with the audio from the selected component
AUDIO: XXXXXX	Any audio source to enjoy with the video from the selected component

INPUT MODE

Press INPUT MODE to select the input mode for your digital components.
Each time you press the button, the input mode of the currently selected component switches.

Select	To
AUTO 2CH	Give priority to digital signals when there are both digital and analog connections. If there are no digital signals, analog is selected.
COAXIAL FIXED	Specify the digital audio signals input to the DIGITAL COAXIAL input jacks.
OPTICAL FIXED	Specify the digital audio signals input to the DIGITAL OPTICAL input jacks.
ANALOG 2CH FIXED	Specify the analog audio signals input to the AUDIO IN (L/R) jacks.

When the MULTI CH[1)] is assigned to a specific function using CUSTOMIZE menu (page 44), the followings are displayed instead of "AUTO 2CH" and "ANALOG 2CH FIXED".

Select	To
AUTO MULTI CH[3)]	Give priority to digital signals when there are both digital and MULTI CH IN[2)] connections. If there are no digital signals, MULTI CH IN[2)] is selected.
MULTI CH FIXED[4)]	Specify the analog audio signals input to the MULTI CH IN[2)] jacks.

1) For STR-DE985, MULTI CH 1 or 2.
2) For STR-DE985, MULTI CH IN 1 or 2.
3) For STR-DE985, AUTO MULTI CH 1 or 2.
4) For STR-DE985, MULTI CH 1 (or 2) FIXED.

Note

When INPUT MODE is set to "AUTO 2CH" or "AUTO MULTI CH", the receiver may not operate correctly. In this case, set the INPUT MODE manually.

MULTI/2CH ANALOG DIRECT

Press MULTI/2CH ANALOG DIRECT to enjoy the audio source connected to the MULTI CH IN[1] jacks or analog 2 channel input jacks. Only volume control and the front speaker balance can be adjusted when set to 2CH ANALOG DIRECT. When set to MULTI CH DIRECT[2], you can adjust balance and level of all the speakers. When this function is on, the surround effects are turned off.

Select	To
MULTI CH DIRECT[2]	Enjoy the audio source connected to the MULTI CH IN[1] jacks. MULTI CH IN[1] indicator lights up in the display. This mode is suitable for enjoying high quality analog source.
2CH ANALOG DIRECT	Enjoy the audio source connected to analog 2 channel jacks. This mode is suitable for enjoying high quality analog source.

1) For STR-DE985, MULTI CH IN 1 or 2.
2) For STR-DE985, MULTI CH 1 (or 2) DIRECT.

MULTI CHANNEL DECODING indicator

This indicator lights up when the unit is decoding signals recorded in a multi channel format.

SPEAKERS A/B

Press SPEAKERS A/B button to output the sound from the speakers connected to the SPEAKERS FRONT terminals.

Each time you press the button, the display changes cyclically as follows:

SPEAKER A → SPEAKER B → SPEAKER OFF

To drive	Select
Speaker System A (Connected to the SPEAKERS FRONT A terminals)	SPEAKER A
Speaker System B (Connected to the SPEAKERS FRONT B terminals)	SPEAKER B

When you select "SPEAKER OFF", no sound will be output from your speakers and "SP. OFF" lights up in the display.

MUTING

Press MUTING to mute the sound. The muting function is canceled when you turn the power on or turn the MASTER VOLUME clockwise to turn the volume up. You can also press MUTING again to cancel the muting function.

PHONES

Use to connect headphones.
When the headphones are connected, speaker output is automatically canceled and "SP. OFF" lights up in the display.
When the headphones are connected, selectable sound fields are HEADPHONE (2CH), HEADPHONE (DIRECT), HEADPHONE (MULTI)[3] and HEADPHONE (THEATER) (page 32).

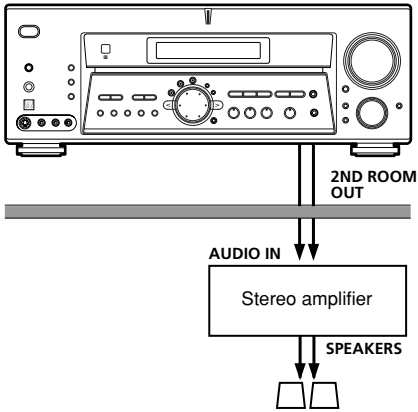
Note

When "HEADPHONE (MULTI)[3]" appears in the display while the headphones are connected, only the front L/R signals of the multi channels are output from the headphones.

3) For STR-DE985, HEADPHONE (MULTI 1) or HEADPHONE (MULTI 2).

Listening to the sound in another room

(STR-DE985 only)



Press 2ND ROOM repeatedly to select the analog audio signals for output to a stereo amplifier in another room. For details on the connection, see page 15.

Each time you press the button, the audio source changes cyclically as follows:

SOURCE*[1] → TAPE → MD/DAT → CD/SACD → TUNER

*[1] The audio signals of the current function is output.

- Even if 2ND ROOM is set to "SOURCE", the sound from front speakers is not output when MULTI/2CH ANALOG DIRECT is set to MULTI CH 1 or 2 DIRECT.
- Only signals from components connected to the analog input jacks are output through the 2ND ROOM OUT jacks. No signals are output from components connected to only the digital input jacks.

Changing the display

DISPLAY

Each time you press DISPLAY, the display changes cyclically as follows:

Index name of the component* → Selected component → Sound field applied to the program source

When the tuner is selected

Index name of the preset station* → Frequency → Sound field applied to the band or the preset station

* Index name appears only when you have assigned one to the component or preset station (page 42). Index name does not appear when only blank spaces have been entered, or it is the same as the function.

DIMMER

Press DIMMER repeatedly to adjust the brightness of the display (5 steps).

When set to the dimmest setting, the display and the blue LED are turned off. However, when you press any button, the display becomes the brightest setting temporary.

You can take advantage of surround sound simply by selecting one of the receiver's pre-programmed sound fields. They bring the exciting and powerful sound of movie theaters and concert halls into your home. You can also customize the sound fields to obtain the sound you want by changing the various surround parameters.
To fully enjoy surround sound, you must register the number and location of you speakers. See "Multi channel surround setup" starting from page 19 to set the speaker parameters before enjoying surround sound.

Automatically decoding the input audio signal

Press A. DEC.

"AUTO DECODING" appears in the display.

This mode automatically detects the type of audio signal being input (Dolby Digital, DTS, or standard 2 channel stereo) and performs the proper decoding if necessary. This mode presents the sound as it was recorded/encoded, without adding any effects (e.g. reverberation).

However, if there are no low frequency signals (Dolby Digital LFE, etc.) it will generate a low frequency signal for output to the sub woofer.

Selecting a sound field

You can enjoy surround sound simply by selecting one of the pre-programmed sound fields according to the program you want to listen to.

Sound field	Display
Normal Surround	NORMAL SURROUND
Cinema Studio EX A	CINEMA STUDIO EX A DCS
Cinema Studio EX B	CINEMA STUDIO EX B DCS
Cinema Studio EX C	CINEMA STUDIO EX C DCS
Mono Movie	MONO MOVIE
Stereo Movie	STEREO MOVIE
Digital Concert Hall A	D. CONCERT HALL A
Digital Concert Hall B	D. CONCERT HALL B
Church	CHURCH
Opera House	OPERA HOUSE
Jazz Club	JAZZ CLUB
Disco/Club	DISCO / CLUB
Live Concert	LIVE CONCERT
Arena	ARENA
Stadium	STADIUM
Game	GAME
Headphone (2CH)	HEADPHONE (2CH)
Headphone Direct	HEADPHONE (DIRECT)
Headphone Multi	HEADPHONE (MULTI)[1)]
Headphone Theater	HEADPHONE THEATER DCS

1) For STR-DE985, HEADPHONE (MULTI 1) or HEADPHONE (MULTI 2).

About DCS (Digital Cinema Sound)

The sound fields with DCS mark use DCS technology. When these sound fields are selected, "Digital Cinema Sound" indicator in the display lights up.

In collaboration with Sony Pictures Entertainment, Sony measured the sound environment of their studios and integrated the data of the measurement and Sony's own DSP (Digital Signal Processor) technology to develop "Digital Cinema Sound". In a home theater, "Digital Cinema Sound" simulates an ideal movie theater sound environment based on the preference of the movie director.

continued

Enjoying movies with Cinema Studio EX

Cinema Studio EX is ideal for enjoying the movie software encoded with multi channel format, such as the Dolby Digital DVD. This mode reproduces the sound characteristics of Sony Pictures Entertainment's studios.

Press CINEMA STUDIO EX A, B or C.

The selected sound field is indicated in the display.

■ CINEMA STUDIO EX A (Cinema Studio EX A)

Reproduces the sound characteristics of the Sony Pictures Entertainment "Cary Grant Theater" cinema production studio. This is a standard mode, great for watching most any type of movie.

■ CINEMA STUDIO EX B (Cinema Studio EX B)

Reproduces the sound characteristics of the Sony Pictures Entertainment "Kim Novak Theater" cinema production studio. This mode is ideal for watching science-fiction or action movies with lots of sound effects.

■ CINEMA STUDIO EX C (Cinema Studio EX C)

Reproduces the sound characteristics of the Sony Pictures Entertainment scoring stage. This mode is ideal for watching musicals or classic films where music is featured in the soundtrack.

About Cinema Studio EX

Cinema Studio EX consists of the following three elements.

- Virtual Multi Dimension

  Creates 5 sets of virtual speakers surrounding the listener from a single pair of actual surround speakers.
- Screen Depth Matching

  In a movie theater, sound seems to come from inside the image reflected on the movie screen. This element creates the same sensation in your listening room by shifting the sound of the front speakers "into" the screen.
- Cinema Studio Reverberation

  Reproduces the reverberations peculiar to a movie theater.

Cinema Studio EX is the integrated mode which operates these elements simultaneously.

Tip

You can select Cinema Studio EX by pressing MODE (SOUND FIELD) repeatedly.

Notes

- The effects provided by the virtual speakers may cause increased noise in the playback signal.
- When listening with sound fields that employ the virtual speakers, you will not be able to hear any sound coming directly from the surround speakers.

Selecting other sound fields

Press MODE (SOUND FIELD) repeatedly to select the sound field you want.

The current sound field is indicated in the display.

■ NORMAL SURROUND (Normal Surround)

Software with multi channel surround audio signals is played back according to the way it was recorded. Software with 2 channel audio signals is decoded with Dolby Pro Logic to create surround effects.

■ MONO MOVIE (Mono Movie)

Creates a theater like environment from movies with monaural soundtracks.

■ STEREO MOVIE (Stereo Movie)

Creates a theater like environment from movies recorded with stereo soundtracks.

■ D. CONCERT HALL A, B (Digital Concert Hall A, B)

Reproduces the acoustics of a concert hall using multi-speaker system and 3D sound imaging for software with 2 channel signals like CDs.

- D. CONCERT HALL A reproduces the sonic character of the CONCERTGEBOUW in Amsterdam, which is famous for its large sound stage due to its reflectivity.
- D. CONCERT HALL B reproduces the sonic character of the MUSIKVEREIN in Vienna, which is famous for its hall resonance and unique reverberative sound.

You can select directly by pressing the buttons on the front panel.

■ CHURCH (Church)

Reproduces the acoustics of a stone church.

■ OPERA HOUSE (Opera House)

Reproduces the acoustics of an opera house.

■ JAZZ CLUB (Jazz Club)

Reproduces the acoustics of a jazz club.

■ DISCO / CLUB (Disco/Club)

Reproduces the acoustics of a discotheque/ dance club.

■ LIVE CONCERT (Live Concert)

Reproduces the acoustics of a 300-seat live concert.

■ ARENA (Arena)

Reproduces the acoustics of a 1000-seat concert hall.

■ STADIUM (Stadium)

Reproduces the feeling of a large open-air stadium.

■ GAME

Obtains maximum audio impact from video game software.

To turn the surround effect off

Press A. DEC or 2CH.

continued

When headphones are connected

You can select the following sound fields only.

■ HEADPHONE (2CH) (Headphone 2CH)

Output the sound in 2 channel (stereo). Standard 2 channel (stereo) sources completely bypass the sound field processing. Multi channel surround formats are downmixed to 2 channel.

■ HEADPHONE (DIRECT) (Headphone Direct)

Outputs the analog signals without digital processing by the equalizer, sound field, etc.

■ HEADPHONE (MULTI)[1] (Headphone Multi)

Outputs the front analog signal from MULTI CH IN[2] jacks.

■ HEADPHONE THEATER (Headphone Theater)

Allows you to experience a theater like environment while listening through a pair of headphones.

1) For STR-DE985, HEADPHONE (MULTI 1) or HEADPHONE (MULTI 2).
2) For STR-DE985, MULTI CH IN 1 or 2.

Tips

- The receiver lets you apply the last selected sound field to a program source whenever it is selected (Sound Field Link). For example, if you listen to CD with "JAZZ CLUB" as the sound field, change to a different program source, then return to CD, "JAZZ CLUB" will be applied again.
- You can identify the encoding format of program sofware by looking at its packaging.

  Dolby Digital discs are labeled with the DOLBY DIGITAL logo, and Dolby Surround encoded programs are labeled with the DOLBY SURROUND PRO · LOGIC logo.
- When sound signals with a sampling frequency of 96 kHz are input, the sound signals are output in stereo automatically, and the sound field is turned off.

Using only the front speakers (2 Channel Stereo)

Press 2CH.

"2CH STEREO" appears in the display.

This mode outputs the sound from the front left and right speakers only. Standard 2 channel (stereo) sources completely bypass the sound field processing. Multi channel surround formats are downmixed to 2 channel.

Note

No sound is output from the sub woofer when "2CH STEREO" is selected. To listen to 2 channel (stereo) sources using the front left and right speakers and a sub woofer, press A. DEC to select "AUTO DECODING".

Enjoying stereo sound in multi channel (Dolby Pro Logic II)

The receiver can reproduce the stereo sound in multi channel through Dolby Pro Logic II. You can activate the decoder using the CUSTOMIZE menu. For details, see page 44.

Selecting the surround back decoding mode (SURR BACK DECODING)

You can select the surround back decoding mode to reproduce the surround back signal and enjoy 6.1 channel surround sound.

Press SURR BACK DECODING to select the surround back decoding mode. “SB DECODING XXXXXX” appears in the display and SB DEC indicator lights up.

- When set to “AUTO”, the receiver performs 6.1 channel matrix decoding only if the 6.1 channel signals decode flag is ON.
- When set to “MATRIX”, the receiver performs 6.1 channel matrix decoding only if the surround signals are 2 channel, regardless of the 6.1 channel decode flag.
- When set to “OFF”, the receiver does not perform 6.1 channel matrix decoding.
- When the 6.1 channel matrix decoding is performed and the surround back speaker is set to “NO”, you can enjoy the surround back signals with virtual 3D technology, even without an actual surround back speaker (the box around SB does not light up). If the surround back speaker is set to “YES”, the surround back signals are output through the actual speaker (SB and the box lights up).

This function works only for the multi channel format [3/2].

This function is effective for the following sound fields.

- AUTO DECODING
- NORMAL SURROUND
- CINEMA STUDIO EX A–C
- MONO MOVIE
- STEREO MOVIE

Tip

You can also select the surround back decoding mode using the SB DECODING parameter in the CUSTOMIZE menu (page 44).

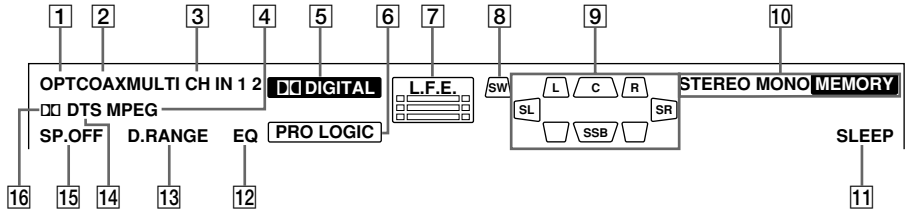
About DVD encoding and playback of Surround EX (6.1 Channel) movies

The Surround EX System used in movie theaters employs a matrix system to produce 6.1 channels from a 5.1 channel film soundtrack. The matrix system reproduces the soundtrack as intended by the filmmaker. All DVD software encoded with Dolby Digital, DTS-ES matrix 6.1, and DTS-ES Discrete 6.1 includes the 5.1 channel soundtrack designed for use in movie theaters. Therefore it is possible to change the soundtrack to the one designed for use in movie theaters.

To enjoy 6.1 channel surround sound (“VIRTUAL MATRIX 6.1” playback function)

- If you do not connect a surround back speaker.
  You can still enjoy 6.1 channel surround sound even if you do not connect a surround back speaker. Press SURR BACK DECODING when you select “CINEMA STUDIO EX A-C” to use the “VIRTUAL MATRIX 6.1” playback function. The sound charateristics of CINEMA STUDIO and the 3D sound imaging create a virtual surround back speaker, and you can experience the surround effect as if you are in a real theater.
  Select “AUTO” or “MATRIX” using the SURR BACK DECODING button.
- If you connect a surround back speaker.
  When “NORMAL SURROUND” is selected, press SURR BACK DECODING to select “MATRIX” or “AUTO”.

Understanding the multi channel surround displays



1 **OPT:** Lights up when the source signal is a digital signal being input through the OPTICAL terminal.

2 **COAX:** Lights up when the source signal is a digital signal being input through the COAXIAL terminal.

3 **MULTI CH IN (1/2):** Lights up when MULTI CH IN (For STR-DE985, MULTI CH IN 1 or 2) is selected.

4 **MPEG:** Lights up when MPEG signals are input.

Note

Only the front 2 channels are compatible with MPEG format. Multi channel surround sound is downmixed and output from the front 2 channels.

5 **DIGITAL:** Lights up when the receiver is decoding signals recorded in the Dolby Digital format.

6 **PRO LOGIC:** Lights up when the receiver applies Pro Logic processing to 2 channel signals in order to output the center and surround channel signals. However, this indicator does not light if the center and surround speakers are set to "NO", and "AUTO DECODING" or "NORMAL SURROUND" is selected.

Note

Pro Logic decoding does not function for MPEG format signals.

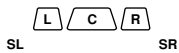
7 **L.F.E.:** Lights up when the disc being played back contains the LFE (Low Frequency Effect) channel. When the sound of the LFE channel signal is actually being reproduced, the bars underneath the letters lights up to indicate the level. Since the LFE signal is not recorded in all parts of the input signal the bar indication will fluctuate (and may turn off) during playback.

8 **SW:** Lights up when sub woofer selection is set to "YES" (page 22) and the audio signal is output from the SUB WOOFER jacks.

9 **Playback channel indicators:** The letters (L, C, R, etc.) indicate the channels being played back. The boxes around the letters vary to show how the receiver downmixes the source sound (based on the speakers settings). When using sound fields like "DIGITAL CONCERT HALL", the receiver adds reverberation based on the source sound.

L (Front Left), R (Front Right), C (Center (monaural)), SL (Surround Left), SR (Surround Right), S (Surround (monaural or the surround components obtained by Pro Logic processing)), SB (Surround Back (the surround back components obtained by 6.1 matrix decoding))

Example:
Recording format (Front/Surround): 3/2
Output channel: Surround speakers absent
Sound Field: AUTO DECODING



10 **Tuner indicators:** Lights up when using the receiver to tune in radio stations, etc. See pages 40–41 for tuner operations.

11 **SLEEP:** Lights up when sleep timer is activated.

12 **EQ:** Lights up when the equalizer functions.

13 **D.RANGE:** Lights up when dynamic range compression is activated. See page 38 to adjust the dynamic range compression.

14 **DTS:** Lights up when DTS signals are input.

Note

When playing a DTS format disc, be sure that you have made digital connections and that INPUT MODE is NOT set to "ANALOG 2CH FIXED" (page 27).

15 **SP.OFF:** Lights up when headphones are inserted or the SPEAKERS A/B button is set to "SPEAKER OFF".

16 **DD:** Lights up when Dolby Digital signals are input.

Customizing sound fields

By adjusting the surround parameters and the equalization of the front, center, surround, and surround back speakers, you can customize the sound fields to suit your particular listening situation.

Once you customize a sound field, the changes are stored in the memory indefinitely. You can change a customized sound field any time by making new adjustments to the parameters.

See the tables starting from page 66 for the parameters available in each sound field.

To get the most from multi channel surround sound

Position your speakers and do the procedures described in "Multi channel surround setup" starting from page 19 before you customize a sound field.

Adjusting the surround parameters

The SURR menu contains parameters that let you customize various aspects of the current sound field. The settings are stored individually for each sound field.

1 Start playing a program source encoded with multi channel surround sound.

2 Press SURR.

The button lights up and the first parameter is displayed.

3 Press < or > to select the parameter you want to adjust.

4 Turn the jog dial to select the setting you want.

The setting is entered automatically.

continued

Initial settings

Parameter	Initial setting
EFFECT	(depends on the sound field)
WALL S__I__H[1)]	Midpoint
REVERB S__I__L[1)]	Midpoint
FRONT REVERB[1)]	STD (STANDARD)
SCREEN DEPTH[1)]	MID
VIR. SPEAKERS[1)]	ON

1) You can set this parameter only when you set "MENU EXPAND" to "ON" in the CUSTOMIZE menu (page 44).

Effect level (EFFECT)

Lets you adjust the "presence" of the current surround effect.

Wall type (WALL)

Lets you control the level of the high frequencies to alter the sonic character of your listening environment by simulating a softer (S) or harder (H) wall. The midpoint designates a neutral wall (made of wood).

Reverberation (REVERB)

Lets you control the spacing of the early reflections to simulate a sonically longer (L) or shorter (S) room. The midpoint designates a standard room with no adjustment.

Front reverberation (FRONT REVERB)

This parameter can be used when "D. CONCERT HALL A, B" is selected. This parameter lets you adjust the amount of reverberations to add to the front signals according to the original reverberations in the source.

- To increase front reverberations, select "WET".
- To decrease front reverberations, select "DRY".

Screen depth (SCREEN DEPTH)

In a movie theater, sound seems to come from inside the image reflected on the movie screen. This parameter lets you create the same sensation in your listening room by shifting the sound of the front speakers "into" the screen. "DEEP" provides the greatest amount of screen depth.

Virtual speakers (VIR. SPEAKERS)

Allows you turn to the virtual speakers created by "CINEMA STUDIO EX A, B, C" on or off.

Adjusting the level parameters

The LEVEL menu contains parameters that let you adjust the balance and volumes of each speaker. The settings are applied to all sound fields.

1 Start playing a program source encoded with multi channel surround sound.

2 Press LEVEL.

The button lights up and the first parameter is displayed.

3 Press < or > to select the parameter you want to adjust.

4 Turn the jog dial to select the setting you want.

The setting is entered automatically.

Initial settings

Parameter	Initial setting
FRONT L_I_R	Center
CENTER LEVEL XXX dB	0 dB
SURR L LEVEL XXX dB	0 dB
SURR R LEVEL XXX dB	0 dB
SURR BACK LEVEL XXX dB	0 dB
S. WOOFER LEVEL XXX dB	0 dB
LFE MIX LEVEL XXX dB[1)]	0 dB
D. RANGE COMP. XXX[1)]	OFF

1) You can set this parameter only when you set "MENU EXPAND" to "ON" in the CUSTOMIZE menu (page 44).

Front balance (FRONT L_I_R)

Lets you adjust the balance between front left and right speakers.

Center level (CENTER LEVEL XXX dB)

Lets you adjust the level of the center speaker.

Surround left level (SURR L LEVEL XXX dB)

Lets you adjust the level of the surround left speaker.

Surround right level (SURR R LEVEL XXX dB)

Lets you adjust the level of the surround right speaker.

Surround back level (SURR BACK LEVEL XXX dB)

Lets you adjust level of the surround back speaker.

Sub woofer level (S. WOOFER LEVEL XXX dB)

Lets you adjust the level of the sub woofer.

LFE (Low Frequency Effect) mix level (LFE MIX LEVEL XXX dB)

Lets you attenuate the level of the LFE (Low Frequency Effect) channel output from the sub woofer without effecting the level of the bass frequencies sent to the sub woofer from the front, center or surround channels via the Dolby Digital or DTS bass redirection circuitry.

- For LFE mix level, "0 dB" outputs the full LFE signal at the mix level determined by the recording engineer.
- To mute the sound of the LFE channel from the sub woofer, select "OFF". However, the low frequency sounds of the front, center, or surround speakers are output from the sub woofer according to the settings made for each speaker in the speaker setup (page 19–22).

continued

Dynamic range compressor (D. RANGE COMP. XXX)

Lets you compress the dynamic range of the sound track. This may be useful when you want to watch movies at low volumes late at night. We recommend using the "MAX" setting.

- To reproduce the sound track with no compression, select "OFF".
- To reproduce the sound track with the dynamic range intended by the recording engineer, select "STD".
- To compress the dynamic range in small steps to achieve the sound you desire, select "0.1"–"0.9".
- To reproduce a dramatic compression of the dynamic range, select "MAX".

Note

Dynamic range compression is possible with Dolby Digital sources only.

Adjusting the equalizer

The EQ menu lets you adjust the equalization of the front, center, surround, and surround back speakers. The settings are stored individually for each sound field.

1 Start playing a program source encoded with multi channel surround sound.

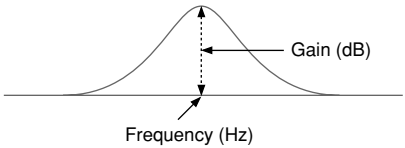
2 Press EQ.

The button lights up and the first parameter is displayed.

3 Press < or > to select the parameter (gain (dB), frequency (Hz)) you want to adjust.

4 Turn the jog dial to select the setting you want.

The setting is entered automatically.



To turn on/off the equalizer

Press EQUALIZER. The EQ indicator in the display lights up when the equalizer is turned on. When you adjust the equalizer using the EQ parameters, the settings are stored separately for each sound field and can be reproduced whenever you turn on the equalizer.

Front speaker bass adjustment (Gain/Frequency*)

Lets you adjust the gain and frequency of bass.

Front speaker midrange adjustment (Gain/Frequency*)

Lets you adjust the gain and frequency of midrange.

Front speaker treble adjustment (Gain/Frequency*)

Lets you adjust the gain and frequency of treble.

Center speaker bass adjustment (Gain/Frequency*)

Lets you adjust the gain and frequency of bass.

Center speaker midrange adjustment (Gain/Frequency*)

Lets you adjust the gain and frequency of midrange.

Center speaker treble adjustment (Gain/Frequency*)

Lets you adjust the gain and frequency of treble.

* You can set the parameter for frequency only when you set "MENU EXPAND" to "ON" in the CUSTOMIZE menu (page 44).

Surround speaker bass adjustment (Gain/Frequency*)

Lets you adjust the gain and frequency of bass.

Surround speaker treble adjustment (Gain/Frequency*)

Lets you adjust the gain and frequency of treble.

Surround back speaker bass adjustment (Gain/Frequency*)

Lets you adjust the gain and frequency of bass.

Surround back speaker treble adjustment (Gain/Frequency*)

Lets you adjust the gain and frequency of treble.

* You can set the parameter for frequency only when you set “MENU EXPAND” to “ON” in the CUSTOMIZE menu (page 44).

Resetting customized sound fields to the factory settings

1 If the power is on, press I/⏻ to turn off the power.

2 Hold down MODE (SOUND FIELD) and press I/⏻.

“S.F Initialize” appears in the display and all sound fields are reset at once.

Before receiving broadcasts, make sure you have connected FM and AM antennas to the receiver (page 7).

Direct tuning

You can enter a frequency of the station you want directly by using the numeric buttons on the supplied remote. For details on the buttons used in this section, see pages 48–57 for remote RM-PG411 and pages 48–55 for remote RM-PP411.

1 Press TUNER on the remote.

The last received station is tuned in.

2 Press FM or AM to select the FM or AM band.

3 Press D. TUNING on the remote.

4 Press the numeric buttons to enter the frequency.

Example 1: FM 102.50 MHz

(1) → (0) → (2) → (5) → (0)

Example 2: AM 1350 kHz
(You don't have to enter the last "0" when the tuning scale is set to 10 kHz.)

(1) → (3) → (5) → (0)

If you cannot tune in a station and the entered numbers flash

Make sure you've entered the right frequency. If not, repeat steps 3 and 4.

If the entered numbers still flash, the frequency is not used in your area.

5 If you've tuned in an AM station, adjust the direction of the AM loop antenna for optimum reception.

6 Repeat steps 2 to 5 to receive another station.

Tips

- If you do not remember the precise frequency, press TUNING + or TUNING – after entering the value close to the frequency you want. The receiver automatically tunes in the station you want. If the frequency seems to be higher than the entered value, press TUNING +, and if the frequency seems to be lower than the entered value, press TUNING –.
- If "STEREO" flashes in the display and the FM stereo reception is poor, press FM MODE to change to monaural (MONO). You will not be able to enjoy the stereo effect, but the sound will be less distorted. To return to stereo mode, press FM MODE again.

The tuning scale differs depending on the area code as shown in the following table. For details on area codes, see page 4.

Area code	FM	AM
U, CA	100 kHz	10 kHz*

* The AM tuning scale can be changed (page 62).

Automatic tuning

If you don't know the frequency of the station you want, you can let the receiver scan all available stations in your area.

1 Rotate FUNCTION to select TUNER.

The last received station is tuned in.

2 Press FM or AM to select the FM or AM band.

3 Press TUNING + or TUNING –.

Press TUNING + to scan from low to high; press TUNING – to scan from high to low.

The receiver stops scanning whenever a station is received.

When the receiver reaches either end of the band

Scanning is repeated in the same direction.

4 To continue scanning, press TUNING + or TUNING – again.

Preset tuning

After you have tuned in stations using Direct Tuning or Automatic Tuning, you can preset them to the receiver. Then you can tune in any of the stations directly by entering its 2-character preset code using the supplied remote. Up to 30 FM or AM stations can be preset. The receiver will also scan all the stations that you have preset.

Before tuning to preset stations, be sure to preset them by performing steps on "Presetting radio stations".

Presetting radio stations

1 Rotate FUNCTION to select TUNER.

The last received station is tuned in.

2 Tune in the station that you want to preset using Direct Tuning (page 40) or Automatic Tuning (page 40).

3 Press MEMORY.

"MEMORY" appears in the display for a few seconds.

Do steps 4 to 6 before "MEMORY" goes out.

4 Press SHIFT to select a memory page (A, B or C).

Each time you press SHIFT, the letter "A", "B", or "C" appears in the display.

5 Press PRESET TUNING + or PRESET TUNING – to select a preset number.

If "MEMORY" goes out before you press the preset number, start again from step 3.

6 Press MEMORY again to store the station.

If "MEMORY" goes out before you can store the station, start again from step 3.

7 Repeat steps 2 to 6 to preset another station.

To change a preset number to another station

Do steps 1 to 6 to preset a new station to the number.

Tuning to preset stations

You can tune the preset stations by either of the following two ways.

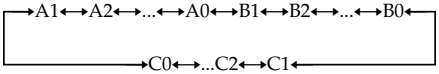
Scanning the preset stations

1 Rotate FUNCTION to select TUNER.

The last received station is tuned in.

2 Press PRESET TUNING + or PRESET TUNING – repeatedly to select the preset station you want.

Each time you press the button, the receiver tunes in one preset station at a time, in the corresponding order and direction as follows:



Using the preset codes

Use the supplied remote to perform the following operations. For details on the buttons used in this section, see pages 48–57 for remote RM-PG411 and pages 48–55 for remote RM-PP411.

1 Press TUNER on the remote.

The last received station is tuned in.

2 Press SHIFT to select a memory page (A, B, or C), then press the preset number of the station you want using the numeric buttons.

Naming preset stations and program sources

You can enter a name (index name) of up to 8 characters for preset stations and program sources. These names (for example, "VHS") appear in the receiver's display when a station or program source is selected. Note that no more than one name can be entered for each preset station or program source.
This function is useful for distinguishing components of the same kind. For example, two VCRs can be specified as "VHS" and "8MM", respectively. It is also handy for identifying components connected to jacks meant for another type of component, for example, a second CD player connected to the MD/DAT jacks (STR-DE985) or MD/TAPE jacks (STR-DE885).

1 To name a preset station
Rotate FUNCTION to select TUNER, then tune in the preset station you want to create an index name for.
The last station you received is tuned in. If you are not familiar with how to tune in preset stations, see "Tuning to preset stations" on page 41.

To name a program source
Select the program source (component) to be named.

2 Press CUSTOMIZE.

3 Press < or > repeatedly until "NAME IN?" appears in the display.

4 Press ENTER.

5 Create an index name by using the jog dial and < or >:
Turn the jog dial to select a character, then press > to move the cursor to the next position.

To insert a space
Turn the jog dial until a blank space appears in the display.

If you've made a mistake
Press < or > repeatedly until the character to be changed flashes, then turn the jog dial to select the right character.

6 Press ENTER.

7 Repeat steps 2 to 6 to assign index name for another station or program source.

Note
When MULTI CH DIRECT (for STR-DE985, MULTI CH 1 (or 2) DIRECT) is selected, "NAME IN?" does not appear in the display.

Recording

Before you begin, make sure you've connected all components properly.

Recording on an audio tape or MiniDisc

You can record on a cassette tape or MiniDisc using the receiver. See the operating instructions of your cassette deck or MD deck if you need help.

1 Select the component to be recorded.

2 Prepare the component for playing.
For example, insert a CD into the CD player.

3 Insert a blank tape or MD into the recording deck and adjust the recording level, if necessary.

4 Start recording on the recording deck, then start playback on the playback component.

Notes

- You cannot record a digital audio signal using a component connected to the analog TAPE OUT or MD/DAT OUT jacks (STR-DE985) or the analog MD/TAPE OUT jacks (STR-DE885). To record a digital audio signal, connect a digital component to the DIGITAL MD/DAT OUT jacks (STR-DE985) or the DIGITAL MD/TAPE OUT jacks (STR-DE885).
- Sound adjustments do not affect the signal output from the TAPE OUT or MD/DAT OUT jacks (STR-DE985) or the MD/TAPE OUT jacks (STR-DE885).
- Some sources contain copy guards to prevent recording. In this case, you may not be able to record from the sources.
- The analog audio signals of the current function is output from the REC OUT jacks.
- When MULTI CH IN (for STR-DE985, MULTI CH IN 1 or 2) is selected, the analog audio signals of the current function is output from the REC OUT jacks.
- No signals are output from DIGITAL OUT jacks (MD/DAT OPTICAL OUT (STR-DE985) or MD/TAPE OPTICAL OUT (STR-DE885)) when you set MULTI/2CH ANALOG DIRECT to 2CH ANALOG DIRECT.

Recording on a video tape

You can record from a VCR, a TV, or an LD player using the receiver. You can also add audio from a variety of audio sources when editing a video tape. See the operating instructions of your VCR or LD player if you need help.

1 Select the program source to be recorded.

2 Prepare the component for playing.

For example, insert the laser disc you want to record into the LD player.

3 Insert a blank video tape into the VCR (VIDEO 1 or VIDEO 2) for recording.

4 Start recording on the recording VCR, then start playing the video tape or laser disc you want to record.

Tip

You can record the sound from any audio source onto a video tape while copying from a video tape or laser disc. Locate the point where you want to start recording from another audio source, select the program source, then start playback. The audio from that source will be recorded onto the audio track of the video tape instead of the audio from the original medium. To resume audio recording from the original medium, select the video source again.

Notes

- Make sure to make both digital and analog connections to the TV/SAT and DVD/LD inputs. Analog recording is not possible if you make only digital connections.
- The analog audio signals of the current function is output from the REC OUT jacks.
- When MULTI CH IN (for STR-DE985, MULTI CH IN 1 or 2) is selected, the analog audio signals of the current function is output from the REC OUT jacks.

Using the Sleep Timer

You can set the receiver to turn off automatically at a specified time.

Press SLEEP on the remote while the power is on.

Each time you press the button, the display changes cyclically as follows:

2 : 00 : 00 → 1 : 30 : 00 → 1 : 00 : 00 → 0 : 30 : 00 → OFF

The display dims after you have specified the time. While using Sleep Timer, “SLEEP” lights up in the display.

Tips

- Press ALT on the remote before you press SLEEP (page 51).
- You can freely specify the time. After pressing SLEEP, specify the time you want using the jog dial and cursor buttons (< or >) on the receiver. The sleep time changes in 1 second intervals. You can specify up to 5 hours.
- To check the remaining time before the receiver turns off, press SLEEP. The remaining time appears in the display.

Adjustments using the CUSTOMIZE button

The CUSTOMIZE button allows you to make the following adjustments.

1 Press CUSTOMIZE.

2 Press < or > to select the parameter you want to adjust.

3 Turn the jog dial to select the setting you want.

The setting is entered automatically.

4 Repeat steps 2 and 3 until you have set all of the parameters that follow.

Initial settings

Parameter	Initial setting
MENU EXPAND XXX	OFF
2CH MODE	PL II MOVIE
SB DECODING XXXXXXX	AUTO
MULTI CH XXXXXXX[1)]	NONE
S. FIELD LINK XXX	ON
POWER SAVE XXX	OFF
AUTO FUNCTION XXX	ON
OSD XXXXXXXXXX[2)]	COLOR
OSD H.POSITION XX[2)]	4
OSD V.POSITION XX[2)]	4
COMMAND MODE XXX	AV2

1) For STR-DE985, MULTI CH 1 or 2 XXXXXXX.
2) STR-DE985 only.

■ MENU EXPAND

Normally, set MENU EXPAND to “OFF” (default setting). When set to “ON”, you can select all adjustable parameters for SET UP, SURR, LEVEL and EQ buttons and do the advanced settings for each menu.

■ 2ch decode mode (2CH MODE)

Lets you specify the type of decoding for the 2 channel source. This receiver incorporates with Dolby Pro Logic II which has movie mode and music mode, and the receiver can reproduce the 2 channel sound in 5.1 channel through Dolby Pro Logic II.

- When set to “PRO LOGIC”, the receiver performs the Pro Logic decoding. The source recorded in 2 channel is decoded into 4 channels.
- When set to “PL II MOVIE”, the receiver performs the Pro Logic II movie mode decoding. This setting is ideal for the movies encoded in Dolby Surround. Besides, this mode can reproduce the sound in 5.1 channel when watching the videos of old movies or in the dubbed language.
- When set to “PL II MUSIC”, the receiver performs the Pro Logic II music mode decoding. This setting is ideal for the normal stereo sources, such as CDs.

Notes

- Dolby Pro Logic II does not function for DTS or MPEG format signals.
- “2CH MODE” only appears when you select “NORMAL SURROUND” or “AUTO DECODING”.

■ Surround back decoding mode (SB DECODING XXXXXX)

You can set this parameter using SURR BACK DECODING on the front panel. For details, see page 33.

■ Multi channel assignment (MULTI CH XXXXXXX) (for STR-DE985, MULTI CH 1 or 2 XXXXXXX)

Lets you assign a function to MULTI CH (for STR-DE985, MULTI CH 1 or 2). You cannot assign TUNER or PHONO.

For STR-DE985, you cannot assign the same function to both MULTI CH 1 and 2.

■ Sound field link (S.FIELD LINK XXX)

Lets you apply the last selected sound field to a program source whenever it is selected. For example, if you listen to CD with STADIUM as the sound field, change to a different program source, then return to CD, STADIUM will be applied again.

■ CONTROL A1 II power save function (POWER SAVE XXX)

Lets you turn on the receiver automatically when the component connected via CONTROL A1 cords (see page 14) is turned on and the playback is started.

When set to “ON”, you can save the power consumption of the receiver during standby mode.

■ CONTROL A1 II auto function (AUTO FUNCTION XXX)

Lets you switch the function of this receiver to the Sony components connected via CONTROL A1 cords (see page 14) automatically when the connected component is set to play mode.

■ Color of the on-screen display (OSD XXXXXXXXXX) (STR-DE985 only)

Lets you select the color of the on-screen display.

■ OSD horizontal position (OSD H.POSTION XX) (STR-DE985 only)

Lets you adjust the position of the on-screen display horizontally.

■ OSD vertical position (OSD V.POSTION XX) (STR-DE985 only)

Lets you adjust the position of the on-screen display vertically.

■ Selecting the command mode of the remote (COMMAND MODE XXX)

Lets you select the command mode of the remote. Change the command mode when you use 2 Sony receivers in the same room.

CONTROL A1 II control system

Getting Started

This section explains the basic functions of the CONTROL A1 II Control System. Certain components have special functions, such as "CD Synchro Dubbing" on cassette decks, that require CONTROL A1 II connections. For detailed information regarding specific operations, be sure to also refer to the Operating Instructions supplied with your component(s).

The CONTROL A1 II Control System was designed to simplify the operation of audio systems composed of separate Sony components. CONTROL A1 II connections provide a path for the transmission of control signals which enable automatic operation and control features usually associated with integrated systems.

Currently, CONTROL A1 II connections between a Sony CD player, amplifier (receiver), MD deck and cassette deck provide automatic function selection and synchronized recording.

In the future, the CONTROL A1 II connection will work as a multifunction bus allowing you to control various functions for each component.

Notes

- The CONTROL A1 II Control System is designed to maintain upward compatibility as the Control System is upgraded to handle new functions. In this case, however, older components will not be compatible with the new functions.
- Do not operate a 2 way remote control unit when the CONTROL A1 II jacks are connected via a PC interface kit to a personal computer running "MD Editor" or similar application. Also, do not operate the connected component in a manner contrary to the functions of the application, as this may cause the application to operate incorrectly.

CONTROL A1 II and CONTROL A1 compatibility

The CONTROL A1 control system has been updated to the CONTROL A1 II which is the standard system in the Sony 300 disc CD changer and other recent Sony components. Components with CONTROL A1 jacks are compatible with components with CONTROL A1 II, and can be connected to each other. Basically, the majority of the functions available with the CONTROL A1 control system will be available with the CONTROL A1 II control system.

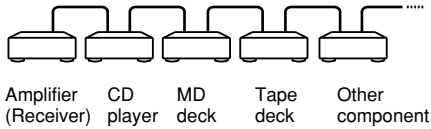
However, when making connections between components with CONTROL A1 jacks and components with CONTROL A1 II jacks, the number of functions that can be controlled may be limited depending on the component. For detailed information, refer to the operating instructions supplied with the component(s).

Connections

Connect monaural mini-plug cords in series to the CONTROL A1 II jacks on the back of each component. You can connect up to 10 CONTROL A1 II compatible components in any order. However, you can connect only one of each type of component (i.e., 1 CD player, 1 MD deck, 1 tape deck and 1 receiver).

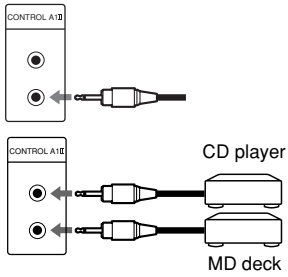
(You may be able to connect more than one CD player or MD deck, depending on the model. Refer to the operating instructions supplied with the respective component for details.)

Example



In the CONTROL A1 II control system, the control signals flow both ways, so there is no distinction of IN and OUT jacks. If a component has more than one CONTROL A1 II jack, you can use either one, or connect different components to each jack.

Jacks and connection examples



On CONTROL A1 jacks and connections

It is possible to make connections between CONTROL A1 and CONTROL A1 II jacks. For details regarding particular connections or set up options, refer to the operating instructions supplied with the component(s).

About the connecting cord

Some CONTROL A1 compatible components are supplied with a connecting cord as an accessory. In this case, use the connecting cord for your connection.

When using a commercially available cord, use a monaural mini-plug cord less than 2 meters long, with no resistance (such as the Sony RK-G69HG).

Basic Functions

The CONTROL A1 II functions will operate as long as the component you want to operate is turned on, even if all of the other connected components are not turned on.

Automatic function selection

When you connect a CONTROL A1 II compatible Sony amplifier (or receiver) to other Sony components using monaural mini-plug cords, the function selector on the amplifier (or receiver) automatically switches to the correct input when you press the play button on one of the connected components.

Notes

- You must connect a CONTROL A1 compatible amplifier (receiver) using a monaural mini-plug cord in order to take advantage of the automatic function selection feature.
- This function only works when the components are connected to the amplifier (or receiver) inputs according to the names on the function buttons. Certain receivers allow you to switch the names of the function buttons. In this case, refer to the operating instructions supplied with the receiver.
- When recording, do not play any components other than the recording source. It will cause the automatic function selection to operate.

Synchronized recording

This function lets you conduct synchronized recording between the selected source and recorder components.

1 Set the function selector on the amplifier (or receiver) to the source component.

2 Set the source component to pause mode (make sure both the ► and II indicators light together).

3 Set the recorder component to the REC-PAUSE mode.

4 Press PAUSE on the recorder component.
The source component is released from the pause mode, and recording begins shortly thereafter.
When playback ends from the source component, recording stops.

Notes

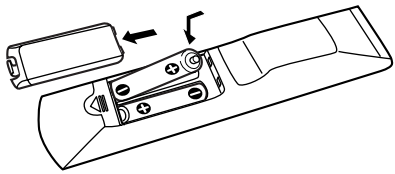
- Do not set more than one component to the pause mode.
- Certain recorder components may be equipped with a special synchronized recording function that uses the CONTROL A1 II Control System, such as “CD Synchro Dubbing”. In this case, refer to the operating instructions supplied with the recorder component.

You can use the remote RM-PG411 (STR-DE985 only) or RM-PP411 (STR-DE885 only) to operate the components in your system.

Before you use your remote

Inserting batteries into the remote

Insert R6 (size-AA) batteries with the + and – properly oriented in the battery compartment. When using the remote, point it at the remote sensor ℝ on the receiver.



Tip

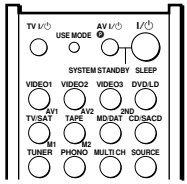
Under normal conditions, the batteries should last for about 6 months. When the remote no longer operates the receiver, replace all batteries with new ones.

Notes

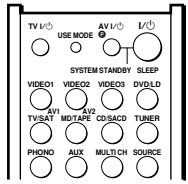
- Do not leave the remote in an extremely hot or humid place.
- Do not use a new battery with an old one.
- Do not expose the remote sensor to direct sunlight or lighting apparatuses. Doing so may cause a malfunction.
- If you don't use the remote for an extended period of time, remove the batteries to avoid possible damage from battery leakage and corrosion.

Remote button description

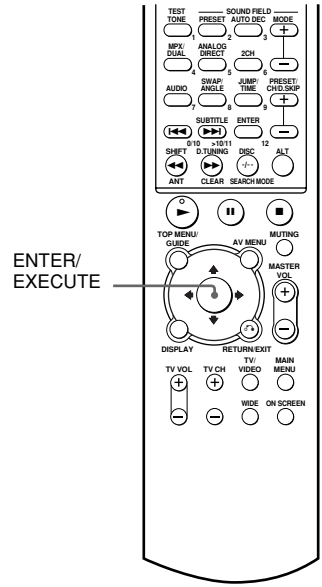
RM-PG411



RM-PP411



RM-PG411 and RM-PP411



The tables below show the settings of each button common to both remote RM-PG411 and RM-PP411.

Remote Button	Operations	Function
I/⏻	Receiver	Turns the receiver on or off.
SLEEP	Receiver	Activates the sleep function and the duration which the receiver turns off automatically.

Remote Button	Operations	Function
VIDEO 1	Receiver	To watch VCR. (VTR mode 3)
VIDEO 2	Receiver	To watch VCR. (VTR mode 1)
VIDEO 3	Receiver	To watch VCR. (VTR mode 2)
DVD/LD	Receiver	To watch DVD or laser disc.
TV/SAT	Receiver	To watch TV programs or satellite receiver.
CD/SACD	Receiver	To listen to compact disc.
TUNER	Receiver	To listen to radio programs.
PHONO	Receiver	To listen to turntable.
MULTI CH	Receiver	Selects MULTI CH IN* source.
SOURCE	Receiver	Selects 2ND AV output.
TEST TONE	Receiver	Press to output test tone.
PRESET	Receiver	Selects preset sound field (e.g. Cinema Studio EX A, B, C).
AUTO DEC	Receiver	Selects AUTO DECODING mode.
MPX/DUAL	Receiver	Select Dual Mono or Bilingual sound of Dolby Digital or DTS, etc.
ANALOG DIRECT	Receiver	Selects 2CH ANALOG DIRECT.
2CH	Receiver	Selects 2CH mode.
MODE +/–	Receiver	Selects sound field mode.
SHIFT	Receiver	Press repeatedly to select a memory page for presetting radio stations or tuning to preset stations.
D.TUNING	Receiver	Tuner station direct key-in-mode.
MUTING	Receiver	Mutes the sound from the receiver.

* For STR-DE985, press repeatedly to select MULTI CH IN 1 or 2.

Remote Button	Operations	Function
↑/↓	Receiver	Select a menu item.
←/→	Receiver	Makes adjustment or change the setting.
MASTER VOL +/–	Receiver	Adjusts the master volume of the receiver.
MAIN MENU	Receiver	Press this button repeatedly to select one of the five cursor modes: EQ, SURR, LEVEL, SET UP and CUSTOMIZE.
ON SCREEN	Receiver	To display the menus of the receiver on the TV screen.
AV I/⏻	TV/VCR/ CD player/ VCD player/ LD player/ DVD player/ MD deck/ DAT deck	Turns the audio and video components on or off.
SYSTEM STANDBY (Press AV I/⏻ and I/⏻ at the same time)	Receiver/TV/ VCR/Satellite tuner/CD player/VCD player/LD player/ DVD player/ MD deck/DAT deck/Tape deck	Turns off the receiver and other Sony audio/video components.
1–9 and 0/10	Receiver	Use with "SHIFT" button to select tuner preset station numeric input during DIRECT TUNING or MEMORY mode.
	CD player/ VCD player/ LD player/ MD deck/ DAT deck	Select track numbers. 0 selects track 10.
	TV/VCR/ Satellite tuner	Select channel numbers.

continued

Remote Button Description (continued)

Remote Button	Operations	Function
>10/11	CD player/ VCD player/ LD player/MD deck/Tape deck	Select track numbers over 10.
AUDIO	TV/ VCR/ DVD player	Changes the sound to Multiplex, Bilingual or Multi channel TV Sound.
SWAP*/ ANGLE	TV	Swaps the small and large picture.
	DVD player	To select viewing angle or changes the angles.
JUMP/ TIME	TV	Toggles between the previous and the current channels.
	CD player/ VCD player/ DVD player	Shows the time or displays the playing time of disc, etc.
PRESET/ CH/	Receiver	Scans and selects preset stations.
D.SKIP +/–	TV/VCR/ satellite tuner	Selects preset channels.
	CD player/ VCD player/ DVD player/ MD deck	Skips discs (multi-disc changer only).
ENTER	TV/VCR/ satellite tuner/ LD player/ MD deck/ DAT deck/ Tape deck	After selecting a channel, disc or track using the numeric buttons, press to enter the value.
DISC	CD player/ VCD player	Selects a disc directly (multi-disc changer only).
ANT	VCR	Selects output signal from aerial terminal: TV signal or VCR program.

* Only for Sony TVs with the picture-in-picture function.

Remote Button	Operations	Function
⏮/⏭	VCR/ CD player/ VCD player/ LD player/ DVD player/ MD deck/ DAT deck/ Tape deck	Skips tracks.
◀◀/▶▶	CD player/ VCD player/ DVD player/ LD player/ MD deck	Searches tracks (forward or backward).
	VCR/ DAT deck/ Tape deck	Fast forwards or rewinds.
▶	VCR/ CD player/ VCD player/ LD player/ DVD player/ MD deck/ DAT deck/ Tape deck	Starts play.
⏸	VCR/ CD player/ VCD player/ LD player/ DVD player/ MD deck/ DAT deck/ Tape deck	Pauses play or record. (Also starts recording with components in record standby.)
■	VCR/ CD player/ VCD player/ LD player/ DVD player/ MD deck/ DAT deck/ Tape deck	Stops play.
DISPLAY	TV/VCR/ VCD player/ LD player/ DVD player	Selects information displayed on the TV screen.
	MD Deck	Selects information on the display.

Remote Button	Operations	Function
RETURN/ EXIT	VCD player/ LD player/ DVD player	Returns to the previous menu.
	Satellite tuner	Exits the menu.
SUBTITLE	DVD player	Changes the subtitles.
CLEAR	DVD player	Press if you made a mistake when you press the number button or press to return to the continuous play etc.
SEARCH MODE	DVD player	Select searching mode. Press to select the unit for search (track, index, etc.)
TOP MENU/	DVD player	Displays DVD title.
GUIDE	Satellite tuner	Displays guide menu.
AV MENU	VCR/Satellite tuner/ DVD player	Displays menu.
↩	VCD player/ LD player/ DVD player	Returns to the previous menu or exits the menu.
↑/↓/←/→	VCR/Satellite tuner/ DVD player	Selects a menu item.
ENTER/ EXECUTE	VCR/satellite tuner/ DVD player	Press to enter the selection.
TV I/⏻	TV	Turns the TV on or off.
-/--	TV	Selects the channel entry mode, either one or two digit.
TV VOL +/–	TV	Adjust the volume of the TV.
TV CH +/–	TV	Select preset TV channels.
TV/ VIDEO	TV	Selects input signal: TV input or video input.
WIDE	TV	Selects the wide picture mode.
USE MODE	Remote	To set up the remote.
AV1 and AV2	Remote	Select the command mode of the remote.
ALT	Remote	Change remote key function to activate those buttons with orange printing.

RM-PG411 only

Remote Button	Operations	Function
TAPE	Receiver	To listen to audio tape.
MD/DAT	Receiver	To listen to Minidisc or DAT deck.
2ND	Remote	Select the command mode of the remote.
M1 and M2	Remote	To perform several commands in sequence automatically.

RM-PP411 only

Remote Button	Operations	Function
MD/TAPE	Receiver	To listen to Minidisc or audio tape.
AUX	Receiver	To listen to an audio equipment.

Notes

- Some functions explained in this section may not work depending on the model of the receiver.
- The above explanation is intended to serve as an example only.
  Therefore, depending on the component the above operation may not be possible or may operate differently than described.
- To activate the buttons with orange printing, press ALT first before pressing the buttons.
- The MPX/DUAL and 12 functions are not available for set operation (RM-PG411 only). The AUX, SOURCE, MPX/DUAL, 12 and ON SCREEN functions are not available for set operation (RM-PP411 only).
- Before you use the ↑/↓/←/→/ENTER/EXECUTE buttons for receiver operation, press MAIN MENU. To operate other components, press TOP MENU/ GUIDE or AV MENU after pressing the function button.

Selecting the mode of the remote

Set the remote mode using the USE MODE button and the remote mode buttons.

Selecting the command mode

You can switch the command mode (AV1 or AV2) of the remote. If the command mode of the receiver and the remote is different, you cannot use the remote to operate the receiver.

Press 1 (AV1) (or 2 (AV2)) while pressing down USE MODE.

The indicator lights once (twice for AV2) , then the command mode switches.

Setting to the 2nd room mode. (RM-PG411 only)

You can use the remote to select the function for the 2nd room (2nd room mode). You can use the function buttons only for the 2nd room.

Press 2ND while pressing down USE MODE (RM-PG411 only).

The indicator lights for a while, then the mode switches to the 2nd room mode.

Tips (RM-PG411 only)

- If you press a function button while pressing down SOURCE, you can select the function for the 2nd room even though the mode is not set to the 2nd room mode.
- If you press SOURCE only, you can output the source signal of the current function of the receiver to the amplifier in the 2nd room.

To check the mode of the remote

Press USE MODE. You can check the remote by the indicator.

Mode	Indicator lights
AV1	once
AV2	twice
2ND (RM-PG411 only)	once (for a while)

To reset the remote to factory settings

Press I/⏻, AV I/⏻, and MASTER VOL – at the same time.

The indicator lights 3 times, then goes off.

Programming the remote

You can program the remote to control non-Sony components by changing the code. Once the control signals have been memorized, you can use those components as part of your system.

Furthermore, you can also program the remote for Sony components that the remote is unable to control. Note that the remote can only control components that accept infrared wireless control signals.

1 Press AV I/⏻ while pressing down USE MODE.

The indicator lights.

2 Press the function button (including TV I/⏻) for the component you want to control.

For example, if you are going to control a CD player, press CD/SACD.

3 Press the numeric buttons to enter the numeric code (or one of the codes if more than one code exists) corresponding to the component and the maker of the component you want to control.

See the tables on pages 54 and 55 for information on the numeric code(s) corresponding to the component and the maker of the component (the first digit and the last two digits of the numeric code correspond to the category and the maker's code respectively.)

4 Press ENTER.

Once the numeric code has been verified, the indicator slowly flashes twice and the remote automatically exits the programming mode.

5 Repeat steps 1 to 4 to control other components.

To cancel programming

Press USE MODE during any step. The remote automatically exits the programming mode.

To activate the function after programming.

Press the programmed button to activate the function you want.

If programming is unsuccessful, check the following:

- If the indicator does not light up in step 1, the batteries are weak. Replace both batteries.
- If the indicator flashes 4 times in quick succession while entering the numeric code, an error has occurred. Start again from step 1.

Notes

- The indicator turns off while a valid button is pressed.
- In step 2, if several function buttons are pressed, only the last pressed button is valid.
- In step 2, if you press TV **I**/⏻, only TV VOL +/–, TV CH +/–, TV/VIDEO and WIDE buttons are reprogrammed.
- In step 3, if a function button is pressed, the new function is selected and the programming procedure returns to the beginning of step 3.
- For the numeric codes, only the first three numbers entered are valid.

To clear the memory of the remote

To clear all programmed and learned signals, do the following to reset the remote to factory settings.

Press I/⏻, AV I/⏻ and MASTER VOL – at the same time.

The indicator flashes 3 times, then goes off.

The numeric codes corresponding to the component and the maker of the component

Use the numeric codes in the tables below to control non-Sony components and also Sony components that the remote is normally unable to control. Since the remote signal that a component accepts differs depending on the model and year of the component, more than one numeric code may be assigned to a component. If you fail to program your remote using one of the codes, try using other codes.

Notes

- The numeric codes are based on the latest information available for each brand. There is a chance, however, that your component will not respond to some or all of the codes.
- All of the functions on this remote may not be available when used with your particular component.

continued

To control a CD player

Maker	Code(s)
SONY	101, 102, 103
DENON	104, 123
JVC	105, 106, 107
KENWOOD	108, 109, 110
MAGNAVOX	111, 116
MARANTZ	116
ONKYO	112, 113, 114
PANASONIC	115
PHILIPS	116
PIONEER	117
TECHNICS	115, 118, 119
YAMAHA	120, 121, 122

To control a DAT deck

Maker	Code(s)
SONY	203
PIONEER	219

To control an MD deck

Maker	Code(s)
SONY	301
DENON	302
JVC	303
KENWOOD	304

To control a tape deck

Maker	Code(s)
SONY	201, 202
DENON	204, 205
KENWOOD	206, 207, 208, 209
NAKAMICHI	210
PANASONIC	216
PHILIPS	211, 212
PIONEER	213, 214
TECHNICS	215, 216
YAMAHA	217, 218

To control an LD player

Maker	Code(s)
SONY	601, 602, 603
PIONEER	606

To control a video CD player

Maker	Code(s)
SONY	605

To control a VCR

Maker	Code(s)
SONY	701, 702, 703, 704, 705, 706
AIWA	710, 750, 757, 758
AKAI	707, 708, 709, 759
BLAUPUNKT	740
EMERSON	711, 712, 713, 714, 715, 716, 750
FISHER	717, 718, 719, 720
GENERAL ELECTRIC	721, 722, 730
GOLDSTAR	723, 753
GRUNDIG	724
HITACHI	722, 725, 729, 741
ITT/NOKIA	717
JVC	726, 727, 728, 736
MAGNAVOX	730, 731, 738
MITSUBISHI/MGA	732, 733, 734, 735
NEC	736
PANASONIC	729, 730, 737, 738, 739, 740
PHILIPS	729, 730, 731
PIONEER	729
RCA/PROSCAN	722, 729, 730, 731, 741, 747
SAMSUNG	742, 743, 744, 745
SANYO	717, 720, 746
SHARP	748, 749
TELEFUNKEN	751, 752
TOSHIBA	747, 755, 756
ZENITH	754

To control a DVD player

Maker	Code(s)
SONY	401, 402, 403
PANASONIC	406, 408
PHILIPS	407
PIONEER	409
TOSHIBA	404
DENON	405

To control a TV

Maker	Code(s)
SONY	501
DAEWOO	504, 505, 506, 507, 515, 544
FISHER	508
GOLDSTAR	503, 511, 512, 515, 534, 544
GRUNDIG	517, 534
HITACHI	513, 514, 515, 544
ITT/NOKIA	521, 522
JVC	516
MAGNAVOX	503, 518, 544
MITSUBISHI/MGA	503, 519, 544
NEC	503, 520, 544
PANASONIC	509, 524
PHILIPS	515, 518
PIONEER	509, 525, 526, 540
RCA/PROSCAN	510, 527, 528, 529, 544
SAMSUNG	503, 515, 531, 532, 533, 534, 544
SANYO	508, 545
SHARP	535
TELEFUNKEN	523, 536, 537, 538
THOMSON	530, 537, 539
TOSHIBA	535, 540, 541
ZENITH	542, 543

To control a satellite tuner or cable box

Maker	Code(s)
SONY	801, 802
JERROLD/G.I.	806, 807, 808, 809, 810, 811, 812, 813, 814
PANASONIC	818
RCA	805, 819
S. ATLANTA	815, 816, 817

Learning the commands of your components

(RM-PG411 only)

By using the Learning function, it is possible for this remote to perform learned commands.

Setting remote control codes that are not stored in the remote

When a remote control code is not one of the presets stored in the remote, it is possible for the remote to learn the code using the Learning function.

1 Press TV I/⏻ while pressing down USE MODE.

The indicator lights.

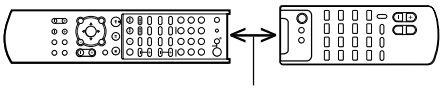
2 Press the function button (including TV I/⏻) for the component you want to learn functions for.

For example, if you are going to learn an operation for a CD player, press CD/SACD.

3 Press the button you want to use for the Learning function.

The indicator turns off while a valid button is pressed, then blinks slowly.

4 Point the remote control code receiver section of the remote towards the receiver/transmitter on the remote control to be learned.



continued

Learning the commands of your components (continued)

5 Press the appropriate button on the remote control to be learned to send the remote button code.

Lightly pressing the button once should be sufficient.

If learning is completed successfully, the indicator slowly flashes twice and the remote automatically exits the learning mode.

When learning is not completed successfully, the indicator flashes 4 times in quick succession and the procedure returns to step 5.

If the memory of the remote is already full, the indicator flashes 8 times in quick succession and the remote automatically exits the learning mode.

Notes

- You can program more than 80 keys for the Learning function. In some cases, you may not be able to program even if you have not programmed 80 buttons. The number of buttons you can program for each FUNCTION button are shown in the following table.

FUNCTION button area	Number of Buttons you can program
VIDEO 1, VIDEO 2, DVD/LD	78 keys
VIDEO 3, TV/SAT, TAPE	78 keys
MD/DAT, CD/SACD, TUNER	78 keys
PHONO, MULTI CH	52 keys
TV buttons (TV I/⏻, TV VOL +/–, TV CH +/–, WIDE, TV/VIDEO)	7 keys

- In steps 2 and 3, the indicator turns off while a valid button is pressed.
- In step 3, if several buttons that can be used for learning are pressed, only the last pressed button is valid. The indiactor blinks slowly, it turns ON while a valid button is pressed.
- In step 5, if a button that can be used for learning is pressed, the new button is selected and the learning procedure returns to the beginning of step 5.

To activate the function after programming.

Press the programmed button to activate the function you want.

To cancel learning

Press USE MODE during any step. The remote automatically exits the learning mode.

To clear the learned codes

Start over from step 1. After step 3, press TV I/⏻ for more than 2 seconds. The indicator lights twice slowly and the learned code is cleared. If TV I/⏻ is pressed less than 2 seconds, the learning procedure returns to the beginning of step 5.

When a learned code is cleared, if the button was previously programmed for another function, the programmed code for that button can be used.

To clear the memory of the remote

To clear all programmed and learned signals, do the following to reset the remote to factory settings.

At the same time, press I/⏻, AV I/⏻, and MASTER VOLUME.

The indicator flashes 3 times, then goes off.

To use a command that has been learned

When selecting a learned function, press the learned button for that function.

Performing several commands in sequence automatically (Macro Play)

(RM-PG411 only)

The Macro Play function lets you link several IR codes in a sequential order as a single command. The remote provides 2 macro lists (M1 and M2). You can specify up to 10 IR codes for each macro list.

Setting the sequence of IR codes

1 Press M1 (or M2) while pressing down USE MODE.

The indicator lights.

2 Press the numeric buttons to select the macro step number.

For example, to program step 1, press 1. The indicator blinks slowly.

3 Point the remote control code receiver section of the remote towards the receiver/transmitter on the remote control to be learned.

4 Press the appropriate button on the remote control to be learned to send the remote button code.

Lightly pressing the button once should be sufficient.

If learning is completed successfully, the indicator slowly flashes twice and the remote automatically exits the learning mode.

When learning is not completed successfully, the indicator flashes 4 times in quick succession and the procedure returns to step 4.

5 Repeat steps 1 through 4 to program up to 10 IR codes.

Tip

If programming is unsuccessful, check the follwing:

– If the indicator does not light up in step 1, the batteries are weak. Replace both batteries.
– If the indicator lights 4 times in quick succession in step 3, an error has occured. Start again from step 1.

To cancel programming

Press USE MODE during any step. The remote automatically exits the macro setting mode.

To delay the output of an IR code

Start over from step 1. In step 3,

- Press M1 (TV/SAT) when the macro setting is M1.
- Press M2 (TAPE) when the macro setting is M2.

1 second delay is programmed at this program step. The indicator lights twice slowly, then the remote automatically exits the macro setting mode.

To clear the programmed IR codes

Clear each macro step individually. In step 3,

- Press M1 (TV/SAT) when the macro setting is M1.
- Press M2 (TAPE) when the macro setting is M2.

The IR code is cleared. The indicator lights twice slowly, then the remote automatically exits the macro setting mode.

To start macro play

Press M1 (TV/SAT) or M2 (TAPE) while the ALT indicator turns ON.

Note

If the Macro Play function does not work properly, program a delay between each operation. See “To delay the output of an IR code”.

Precautions

On safety

Should any solid object or liquid fall into the cabinet, unplug the receiver and have it checked by qualified personnel before operating it any further.

On power sources

- Before operating the unit, check that the operating voltage is identical with your local power supply. The operating voltage is indicated on the nameplate at the rear of the receiver.
- The unit is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet, even if the receiver itself has been turned off.
- If you are not going to use the receiver for a long time, be sure to disconnect the receiver from the wall outlet. To disconnect the AC power cord, grasp the plug itself; never pull the cord.
- (Models of area code U, CA only)
  One blade of the plug is wider than the other for the purpose of safety and will fit into the wall outlet only one way. If you are unable to insert the plug fully into the outlet, contact your dealer.
- AC power cord must be changed only at the qualified service shop.

On heat buildup

Although the unit heats up during operation, this is not a malfunction. If you continuously use this unit at a large volume, the cabinet temperature of the top, side and bottom rises considerably. To avoid burning yourself, do not touch the cabinet.

On placement

- Place the receiver in a location with adequate ventilation to prevent heat buildup and prolong the life of the receiver.
- Do not place the receiver near heat sources, or in a place subject to direct sunlight, excessive dust or mechanical shock.
- Do not place anything on top of the cabinet that might block the ventilation holes and cause malfunctions.

On operation

Before connecting other components, be sure to turn off and unplug the receiver.

On cleaning

Clean the cabinet, panel and controls with a soft cloth slightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzine.

If you have any question or problem concerning your receiver, please consult your nearest Sony dealer.

Troubleshooting

If you experience any of the following difficulties while using the receiver, use this troubleshooting guide to help you remedy the problem. Also, see “Checking the connections” on page 25 to verify that the connections are correct. Should any problem persist, consult your nearest Sony dealer.

There is no sound or only a very low-level sound no matter which component is selected.

- Check that the speakers and components are connected securely and correctly.
- Check that both the receiver and all the components are turned on.
- Check that the MASTER VOLUME control is not set at VOLUME MIN.
- Check that the SPEAKERS A/B button is not set to “SPEAKER OFF” and is set accordingly to your SPEAKERS FRONT system (page 27).
- Press MUTING to cancel the muting function.
- Check that the headphones are not connected.
- The protective device on the receiver has been activated because of a short circuit (“PROTECT” flashes). Turn off the receiver, eliminate the short-circuit problem and turn on the power again.

There is no sound from a specific component.

- Check that the component is connected correctly to the audio input jacks for that component.
- Check that the cord(s) used for the connection is (are) fully inserted into the jacks on both the receiver and the component.
- Check that you have selected the correct component on the receiver.

There is no sound from one of the front speakers.

Connect a pair of headphones to the PHONES jack to verify that sound is output from the headphones (page 27).

If only one channel is output from the headphones, the component may not be connected to the receiver correctly. Check that all the cords are fully inserted into the jacks on both the receiver and the component.

If both channels are output from the headphones, the front speaker may not be connected to the receiver correctly. Check the connection of the front speaker which is not outputting any sound.

The left and right sounds are unbalanced or reversed.

- Check that the speakers and components are connected correctly and securely.
- Adjust balance parameters in the LEVEL menu.

There is severe hum or noise.

- Check that the speakers and components are connected securely.
- Check that the connecting cords are away from a transformer or motor, and at least 3 meters away from a TV set or fluorescent light.
- Move your TV away from the audio components.
- Make sure you have grounded ⏚ SIGNAL GND terminal (only when a turntable is connected).
- The plugs and jacks are dirty. Wipe them with a cloth slightly moistened with alcohol.

There is no sound or only a very low-level sound is heard from the center or/and surround speakers.

- Make sure the sound field function is on (press MODE (SOUND FIELD)).
- Select a sound field containing the word "CINEMA STUDIO EX" (pages 29–30).
- Adjust the speaker level (page 25).
- Make sure the center or/and surround speaker size parameter is set to either "SMALL" or "LARGE" (page 21).

There is no sound from the active sub woofer.

There is no sound output from the SUB WOOFER terminal depending on the sound field (page 67).

The surround effect cannot be obtained.

Make sure the sound field function is on (press MODE (SOUND FIELD)).

Dolby Digital or DTS multi channel sound is not reproduced.

- Check that the playing DVD, etc. is recorded in Dolby Digital or DTS format.
- When connecting the DVD player, etc. to the digital input jacks of this receiver, check the audio setting (settings for the audio output) of the connected component.

Recording cannot be done.

- Check that the components are connected correctly.
- Select the source component with FUNCTION control.
- Make sure that INPUT MODE is set to "ANALOG 2CH FIXED" before recording from a digital component connected to the analog MD/DAT or TAPE terminals (STR-DE985) or the analog MD/TAPE terminals (STR-DE885).
- Make sure that INPUT MODE is set to "COAXIAL FIXED" or "OPTICAL FIXED" (page 26) before recording from a digital component connected to the DIGITAL MD/DAT OUT terminals (STR-DE985) or the DIGITAL MD/TAPE OUT terminals (STR-DE885).

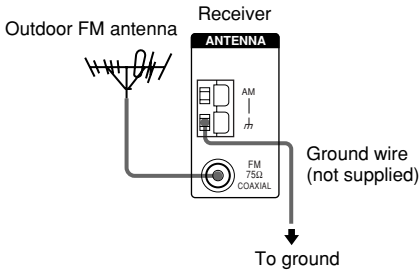
continued

To connect an LD player via an RF demodulator.

Connect the LD player to the RF demodulator, then connect the RF demodulator's optical or coaxial digital output to the receiver's jack. When making this connection, be sure to set INPUT MODE manually (page 26). The receiver may not operate correctly if INPUT MODE is set to "AUTO 2CH". For details on DOLBY DIGITAL RF hookups, see the operating instructions supplied with your RF demodulator.

The FM reception is poor.

Use a 75-ohm coaxial cable (not supplied) to connect the receiver to an outdoor FM antenna as shown below. If you connect the receiver to an outdoor antenna, ground it against lightning. To prevent a gas explosion, do not connect the ground wire to a gas pipe.



Radio stations cannot be tuned in.

- Check that the antennas are connected securely. Adjust the antennas and connect an external antenna if necessary.
- The signal strength of the stations is too weak (when tuning in with automatic tuning). Use direct tuning.
- Make sure you set the tuning interval correctly (when tuning in AM stations with direct tuning).
- No stations have been preset or the preset stations have been cleared (when tuning by scanning preset stations). Preset the stations (page 41).
- Press DISPLAY so that the frequency appears in the display.

There is no picture or an unclear picture appears on the TV screen or monitor.

- Select the appropriate function on the receiver.
- Set your TV to the appropriate input mode.
- Move your TV away from the audio components.

The remote does not function.

- The MPX/DUAL and 12 buttons on the remote are not available (RM-PG411 only).
- The AUX, SOURCE, MPX/DAUL, 12 and ON SCREEN buttons on the remote are not available (RM-PP411 only).
- Point the remote at the remote sensor R on the receiver.
- Check that the mode of the remote corresponds to that of the receiver (page 44 and 52).
- Remove any obstacles in the path between the remote and the receiver.
- Replace both batteries in the remote with new ones, if they are weak.
- Make sure you select the correct function on the remote.
- Press MAIN MENU on the remote before you use the ↑/↓/←/→ buttons for receiver operation (page 51).

Clearing the receiver's memory

To clear	See
All memorized settings	page 19
Customized sound fields	page 39

Specifications

AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:

With 8 ohm loads, both channels driven, from 20 – 20,000 Hz; rated 100 watts per channel minimum RMS power, with no more than 0.09 % total harmonic distortion from 250 milliwatts to rated output (Models of area code U only).

Amplifier section

POWER OUTPUT
Models of area code U, CA
Rated Power Output at Stereo Mode
(8 ohms 20 Hz – 20 kHz, THD 0.09 %)
100 W + 100 W

Reference Power Output
(8 ohms 1 kHz, THD 0.7 %)

FRONT[1]:	100 W/ch
CENTER[1]:	100 W
SURR[1]:	100 W/ch
SURR BACK[1)2)]:	100 W

1) Depending on the sound field settings and the source, there may be no sound output.

Frequency response

PHONO	RIAA equalization curve ±0.5 dB
MULTI CH IN (1, 2)[2], CD/SACD, TAPE[2], MD/DAT[2], MD/TAPE[3] , TV/SAT, DVD/LD, VIDEO 1, 2, 3	10 Hz – 70 kHz +0.5/–2 dB (with sound field and equalizer bypassed)

Inputs (Analog)

PHONO	Sensitivity: 4 mV Impedance: 50 kilohms S/N[4]: 86 dB (A, 4 mV[5])
MULTI CH IN (1, 2)[2], CD/SACD, TAPE[2], MD/DAT[2], MD/TAPE[3] , TV/SAT, DVD/LD, VIDEO 1, 2, 3	Sensitivity: 250 mV Impedance: 50 kilohms S/N[4]: 96 dB (A, 250 mV[5])

Inputs (Digital)

DVD/LD (Coaxial)	Sensitivity: – Impedance: 75 ohms S/N: 100 dB (A, 20 kHz LPF)
CD/SACD, TV/SAT, MD/DAT[2], MD/TAPE[3] , VIDEO 3 (Optical)	Sensitivity: – Impedance: – S/N: 100 dB (A, 20 kHz LPF)

Outputs (Analog)

MD/DAT[2], TAPE[2] MD/TAPE[3] (OUT), VIDEO 1, 2 (AUDIO OUT)	Voltage: 250 mV Impedance: 10 kilohms
SUB WOOFER, SURR BACK, 2ND ROOM[2]	Voltage: 2 V Impedance: 1 kilohms

Outputs (Digital)

MD/DAT[2], MD/TAPE[3] (Optical)	Sensitivity: -

2) STR-DE985 only.
3) STR-DE885 only.
4) INPUT SHORT.
5) Weighted network, input level.

EQ

BASS:	99 Hz~1.0 kHz (21 steps)
MID:	198 Hz~10 kHz (37 steps)
TREBLE:	1.0 kHz~10 kHz (23 steps)
Gain levels:	±10 dB, 1 dB step

FM tuner section

Tuning range 87.5 - 108.0 MHz

Antenna terminals 75 ohms, unbalanced

Intermediate frequency
10.7 MHz

Sensitivity

Mono:	18.3 dBf, 2.2 µV/75 ohms
Stereo:	38.3 dBf, 22.5 µV/75 ohms

Usable sensitivity 11.2 dBf, 1 µV/75 ohms

S/N

Mono:	76 dB
Stereo:	70 dB

continued

Harmonic distortion at 1 kHz
Mono: 0.3%
Stereo: 0.5%

Separation 45 dB at 1 kHz

Frequency response 30 Hz – 15 kHz, +0.5/–2 dB

Selectivity 60 dB at 400 kHz

AM tuner section

Tuning range
Models of area code U, CA
With 10-kHz tuning scale: 530 – 1710 kHz[6)]
With 9-kHz tuning scale: 531 – 1710 kHz[6)]

Antenna Loop antenna

Intermediate frequency
450 kHz

Usable sensitivity 50 dB/m (at 1,000 kHz or 999 kHz)

S/N 54 dB (at 50 mV/m)

Harmonic distortion 0.5 % (50 mV/m, 400 Hz)

Selectivity
At 9 kHz: 35 dB
At 10 kHz: 40 dB

6) You can change the AM tuning scale to 9 kHz or 10 kHz. After tuning in any AM station, turn off the receiver. Hold down PRESET TUNING + and press **I**/⏻. All preset stations will be erased when you change the tuning scale. To reset the scale to 10 kHz (or 9 kHz), repeat the procedure.

Video section

Inputs
Video: 1 Vp-p, 75 ohms
S-video: Y: 1 Vp-p, 75 ohms
C: 0.286 Vp-p, 75 ohms
Component Video: Y: 1 Vp-p, 75 ohms
P_B B-Y: 0.7 Vp-p, 75 ohms
P_R R-Y: 0.7 Vp-p, 75 ohms

Outputs
Video: 1 Vp-p, 75 ohms
S-video: Y: 1 Vp-p, 75 ohms
C: 0.286 Vp-p, 75 ohms
Component Video: Y: 1 Vp-p, 75 ohms
P_B B-Y: 0.7 Vp-p, 75 ohms
P_R R-Y: 0.7 Vp-p, 75 ohms

General

Power requirements

Area code	Power requirements
U, CA	120 V AC, 60 Hz

Power consumption

Area code	Power consumption
U	STR-DE985: 265 W STR-DE885: 210 W
CA	STR-DE985: 360 VA STR-DE885: 300 VA

Power consumption (during standby mode)
0.5 W (when "POWER SAVE" in the CUSTOMIZE menu is set to "ON") (page 44).

AC outlets 2 switched, 120 W/1A MAX

Dimensions 430 × 157.5 × 369 mm (16 7/8 × 6 2/8 × 14 4/8 inches) including projecting parts and controls

Mass (Approx.) 9.5 kg (20 lb 16 oz)

Supplied accessories
FM wire antenna (1)
AM loop antenna (1)
Remote commander (1)
- RM-PG411 (STR-DE985 only)
- RM-PP411 (STR-DE885 only)

R6 (size-AA) batteries (2)
Audio/video/control S cord (STR-DE985 only) (1)
Monaural mini-plug cord (STR-DE985 only) (1)

For details on the area code of the component you are using, see page 4.

Design and specifications are subject to change without notice.

Tables of settings using SURR, LEVEL, EQ, SET UP and CUSTOMIZE buttons

You can make various settings using the LEVEL, SURR, EQ, SET UP and CUSTOMIZE buttons, jog dial, and cursor buttons. The tables below show each of the settings that these buttons can make.

Press	Press < or > to select	Turn jog dial to select	Page
SURR	EFFECT	depends on the sound field (21 steps)	35
	WALL S_I_H[1)]	–8 to +8 (1 increment steps)	
	REVERB S_I_L[1)]	–8 to +8 (1 increment steps)	
	FRONT REVERB[1)]	DRY, STD, WET	
	SCREEN DEPTH[1)]	OFF, MID, DEEP	
	VIR. SPEAKERS[1)]	OFF, ON	
LEVEL	FRONT L_I_R	–8 dB to +8 dB (1 dB steps)	37
	CENTER LEVEL XXX dB	–10 dB to +10 dB (1 dB steps)	
	SURR L LEVEL XXX dB	–10 dB to +10 dB (1 dB steps)	
	SURR R LEVEL XXX dB	–10 dB to +10 dB (1 dB steps)	
	SURR BACK LEVELXXX dB	–10 dB to +10 dB (1 dB steps)	
	S. WOOFER LEVEL XXX dB	–10 dB to +10 dB (1 dB steps)	
	LFE MIX LEVEL XXX dB[1)]	OFF, –20 dB to 0 dB (1 dB steps)	
	D. RANGE COMP. XXX[1)]	OFF, 0.1 to 0.9 (0.1 steps), STD, MAX	

1) You can set this parameter only when you set “MENU EXPAND” to “ON” in the CUSTOMIZE menu (page 44).

continued

Tables of settings using SURR, LEVEL, EQ, SET UP and CUSTOMIZE buttons (continued)

Press	Press < or > to select	Turn jog dial to select	Page
EQ	FRONT BASS GAIN	–10 dB to +10 dB (1 dB steps)	38
	FRONT BASS FREQUENCY[1)]	99 Hz to 1.0 kHz (21 steps)	
	FRONT MID GAIN	–10 dB to +10 dB (1 dB steps)	
	FRONT MID FREQUENCY[1)]	198 Hz to 10 kHz (37 steps)	
	FRONT TREBLE GAIN	–10 dB to +10 dB (1 dB steps)	
	FRONT TREBLE FREQUENCY[1)]	1.0 kHz to 10 kHz (23 steps)	
	CENTER BASS GAIN	–10 dB to +10 dB (1 dB steps)	
	CENTER BASS FREQUENCY[1)]	99 Hz to 1.0 kHz (21 steps)	
	CENTER MID GAIN	–10 dB to +10 dB (1 dB steps)	
	CENTER MID FREQUENCY[1)]	198 Hz to 10 kHz (37 steps)	
	CENTER TREBLE GAIN	–10 dB to +10 dB (1 dB steps)	
	CENTER TREBLE FREQUENCY[1)]	1.0 kHz to 10 kHz (23 steps)	
	SURROUND BASS GAIN	–10 dB to +10 dB (1 dB steps)	
	SURROUND BASS FREQUENCY[1)]	99 Hz to 1.0 kHz (21 steps)	
	SURROUND TREBLE GAIN	–10 dB to +10 dB (1 dB steps)	
	SURROUND TREBLE FREQUENCY[1)]	1.0 kHz to 10 kHz (23 steps)	
	SURROUND BACK BASS GAIN	–10 dB to +10 dB (1 dB steps)	
	SURROUND BACK BASS FREQUENCY[1)]	99 Hz to 1.0 kHz (21 steps)	
	SURROUND BACK TREBLE GAIN	–10 dB to +10 dB (1 dB steps)	
	SURROUND BACK TREBLE FREQUENCY[1)]	1.0 kHz to 10 kHz (23 steps)	

1) You can set this parameter only when you set “MENU EXPAND” to “ON” in the CUSTOMIZE menu (page 44).

Press	Press < or > to select	Turn jog dial to select	Page
SET UP	FRONT	SMALL, LARGE	20
	CENTER	NO, SMALL, LARGE	
	SURROUND	NO, SMALL, LARGE	
	SURR BACK	NO, SMALL, LARGE	
	SUB WOOFER	NO, YES	
	SURR POSI.[1)]	SIDE, MIDDLE, BEHIND	
	SURR HEIGHT[1)]	LOW, HIGH	
	SURR BACK HGT.[1)]	LOW, HIGH	
	FRONT XX.X feet[1)]	3 feet to 40 feet (1 foot steps)[2)]	
	CENTER XX.X feet[1)]	3 feet to 40 feet (1 foot steps)[2)]	
	SURROUND XX.X feet[1)]	3 feet to 40 feet (1 foot steps)[2)]	
	SURR BACK XX.X feet[1)]	3 feet to 40 feet (1 foot steps)[2)]	
	SUB WOOFER XX.X feet[1)]	3 feet to 40 feet (1 foot steps)[2)]	
	DISTANCE UNIT[1)]	meter, feet	
	FRONT SP > XXX Hz[1) 3)]	40 Hz to 200 Hz (10 Hz steps)	
	CENTER SP > XXX Hz[1) 3)]	40 Hz to 200 Hz (10 Hz steps)	
	SURROUND SP > XXX Hz[1) 3)]	40 Hz to 200 Hz (10 Hz steps)	
	SURR BACK SP > XXX Hz[1) 3)]	40 Hz to 200 Hz (10 Hz steps)	
	LFE HIGH CUT > XXX Hz[1)]	40 Hz to 200 Hz (10 Hz steps)	
	S.W PHASE[1)]	NORMAL, REVERSE	
CUSTOMIZE	MENU EXPAND	OFF, ON	44
	2CH MODE	PRO LOGIC, PL II MOVIE, PL II MUSIC	
	SB DECODING XXXXXXX	OFF, AUTO, MATRIX	
	MULTI CH XXXXXXX[4)]	NONE, Every function (except for TUNER and PHONO)	
	S.FIELD LINK XXX	OFF, ON	
	POWER SAVE XXX	OFF, ON	
	AUTO FUNCTION XXX	OFF, ON	
	OSD XXXXXXXXX[5)]	COLOR, MONOCHROME	
	OSD H.POSITION XX[5)]	0 to 64 (1 steps)	
	OSD V.POSITION XX[5)]	0 to 32 (1 step)	
	COMMAND MODE XXX	AV1, AV2	

1) You can set this parameter only when you set “MENU EXPAND” to “ON” in the CUSTOMIZE menu (page 44).
2) Or 1 meter to 12 meters (0.1 meter steps).
3) When the speakers are set to SMALL only.
4) For STR-DE985, MULT CH 1 XXXXXXX or MULTI CH 2 XXXXXXX.
5) STR-DE985 only.

Adjustable parameters for each sound field

The adjusted SURR and EQ parameters are stored in each sound field. The adjusted LEVEL parameters are applied to all the sound fields.

	< SURR					>
	EFFECT LEVEL	WALL TYPE	REVERB TIME	FRONT REVERB	SCREEN DEPTH	VIRTUAL SPEAKERS
2CH STEREO						
AUTO DECODING						
NORMAL SURROUND						
CINEMA STUDIO EX A	●				●	●
CINEMA STUDIO EX B	●				●	●
CINEMA STUDIO EX C	●				●	●
MONO MOVIE	●	●	●			
STEREO MOVIE	●	●	●			
D. CONCERT HALL A	●			●		
D. CONCERT HALL B	●			●		
CHURCH	●	●	●			
OPERA HOUSE	●	●	●			
JAZZ CLUB	●	●	●			
DISCO / CLUB	●	●	●			
LIVE CONCERT	●	●	●			
ARENA	●	●	●			
STADIUM	●	●	●			
GAME	●	●	●			
HEADPHONE (2CH)						
HEADPHONE (DIRECT)						
HEADPHONE (MULTI)[1)]						
HEADPHONE THEATER	●					
MULTI CH IN[2)]						
2CH ANALOG DIRECT						
PCM96K						

1) For STR-DE985, HEADPHONE (MULTI 1) or HEADPHONE (MULTI 2).
2) For STR-DE985, MULTI CH IN 1 or 2.

	< LEVEL							>
	FRONT BAL	CENTER LEVEL	SURR L LEVEL	SURR R LEVEL	SURR BACK LEVEL	S. WOOFER LEVEL	LFE MIX[1]	D.RANGE COMP[1]
2CH STEREO	●						●	●
AUTO DECODING	●	●	●	●	●	●	●	●
NORMAL SURROUND	●	●	●	●	●	●	●	●
CINEMA STUDIO EX A	●	●	●	●	●	●	●	●
CINEMA STUDIO EX B	●	●	●	●	●	●	●	●
CINEMA STUDIO EX C	●	●	●	●	●	●	●	●
MONO MOVIE	●	●	●	●	●	●	●	●
STEREO MOVIE	●	●	●	●	●	●	●	●
D. CONCERT HALL A	●	●	●	●	●	●[2]	●	●
D. CONCERT HALL B	●	●	●	●	●	●[2]	●	●
CHURCH	●	●	●	●	●	●[2]	●	●
OPERA HOUSE	●	●	●	●	●	●[2]	●	●
JAZZ CLUB	●	●	●	●	●	●[2]	●	●
DISCO / CLUB	●	●	●	●	●	●	●	●
LIVE CONCERT	●	●	●	●	●	●[2]	●	●
ARENA	●	●	●	●	●	●[2]	●	●
STADIUM	●	●	●	●	●	●[2]	●	●
GAME	●	●	●	●	●	●	●	●
HEADPHONE (2CH)	●							●
HEADPHONE (DIRECT)	●							
HEADPHONE (MULTI)[3]	●							
HEADPHONE THEATER	●							●
MULTI CH IN 1	●	●	●	●	●	●		
MULTI CH IN 2	●	●	●	●		●		
2CH ANALOG DIRECT	●							
PCM96K	●							

1) These parameters may not operate depending on the source or adjustments. For details, see each item in "Adjusting the level parameters" (page 37).

2) When these sound fields are selected, there is no sound output from the sub woofer if the front speaker size is set to "LARGE". However, sound will be output from the sub woofer if the digital input signal contains L.F.E. signals.

3) For STR-DE985, HEADPHONE (MULTI 1) or HEADPHONE (MULTI 2).

continued

Adjustable parameters for each sound field (continued)

	<		EQ			>
	<		FRONT			>
	BASS GAIN	BASS FREQ	MID GAIN	MID FREQ	TREBLE GAIN	TREBLE FREQ
2CH STEREO	●	●	●	●	●	●
AUTO DECODING	●	●	●	●	●	●
NORMAL SURROUND	●	●	●	●	●	●
CINEMA STUDIO EX A	●	●	●	●	●	●
CINEMA STUDIO EX B	●	●	●	●	●	●
CINEMA STUDIO EX C	●	●	●	●	●	●
MONO MOVIE	●	●	●	●	●	●
STEREO MOVIE	●	●	●	●	●	●
D. CONCERT HALL A	●	●	●	●	●	●
D. CONCERT HALL B	●	●	●	●	●	●
CHURCH	●	●	●	●	●	●
OPERA HOUSE	●	●	●	●	●	●
JAZZ CLUB	●	●	●	●	●	●
DISCO / CLUB	●	●	●	●	●	●
LIVE CONCERT	●	●	●	●	●	●
ARENA	●	●	●	●	●	●
STADIUM	●	●	●	●	●	●
GAME	●	●	●	●	●	●
HEADPHONE (2CH)	●	●	●	●	●	●
HEADPHONE (DIRECT)						
HEADPHONE (MULTI)[1)]						
HEADPHONE THEATER	●	●	●	●	●	●
MULTI CH IN[2)]						
2CH ANALOG DIRECT						
PCM96K						

1) For STR-DE985, HEADPHONE (MULTI 1) or HEADPHONE (MULTI 2).
2) For STR-DE985, MULTI CH IN 1 or 2.

	<		EQ			>
	<		CENTER			>
	BASS GAIN	BASS FREQ	MID GAIN	MID FREQ	TREBLE GAIN	TREBLE FREQ
2CH STEREO						
AUTO DECODING	●	●	●	●	●	●
NORMAL SURROUND	●	●	●	●	●	●
CINEMA STUDIO EX A	●	●	●	●	●	●
CINEMA STUDIO EX B	●	●	●	●	●	●
CINEMA STUDIO EX C	●	●	●	●	●	●
MONO MOVIE	●	●	●	●	●	●
STEREO MOVIE	●	●	●	●	●	●
D. CONCERT HALL A	●	●	●	●	●	●
D. CONCERT HALL B	●	●	●	●	●	●
CHURCH	●	●	●	●	●	●
OPERA HOUSE	●	●	●	●	●	●
JAZZ CLUB	●	●	●	●	●	●
DISCO / CLUB	●	●	●	●	●	●
LIVE CONCERT	●	●	●	●	●	●
ARENA	●	●	●	●	●	●
STADIUM	●	●	●	●	●	●
GAME	●	●	●	●	●	●
HEADPHONE (2CH)						
HEADPHONE (DIRECT)						
HEADPHONE (MULTI)[1)]						
HEADPHONE THEATER						
MULTI CH IN[2)]						
2CH ANALOG DIRECT						
PCM96K						

1) For STR-DE985, HEADPHONE (MULTI 1) or HEADPHONE (MULTI 2).
2) For STR-DE985, MULTI CH IN 1 or 2.

continued

Adjustable parameters for each sound field (continued)

	<	EQ		>
	<	SURROUND/SURROUND BACK		>
	BASS GAIN	BASS FREQ	TREBLE GAIN	TREBLE FREQ
2CH STEREO				
AUTO DECODING	●	●	●	●
NORMAL SURROUND	●	●	●	●
CINEMA STUDIO EX A	●	●	●	●
CINEMA STUDIO EX B	●	●	●	●
CINEMA STUDIO EX C	●	●	●	●
MONO MOVIE	●	●	●	●
STEREO MOVIE	●	●	●	●
D. CONCERT HALL A	●	●	●	●
D. CONCERT HALL B	●	●	●	●
CHURCH	●	●	●	●
OPERA HOUSE	●	●	●	●
JAZZ CLUB	●	●	●	●
DISCO / CLUB	●	●	●	●
LIVE CONCERT	●	●	●	●
ARENA	●	●	●	●
STADIUM	●	●	●	●
GAME	●	●	●	●
HEADPHONE (2CH)				
HEADPHONE (DIRECT)				
HEADPHONE (MULTI)[1)]				
HEADPHONE THEATER				
MULTI CH IN[2)]				
2CH ANALOG DIRECT				
PCM96K				

1) For STR-DE985, HEADPHONE (MULTI 1) or HEADPHONE (MULTI 2).
2) For STR-DE985, MULTI CH IN 1 or 2.

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